



Hon. William P. Ellison.

NR



3 1323 00360 5218

The Inaugural Address

OF

Hon. J. Wesley Kimball,

Mayor of Newton,

To the City Council,

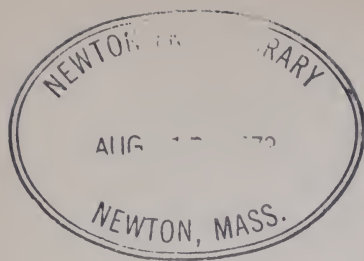
January 4, 1886.



Boston :

Printed by Rand, Avery, & Company,

1886.



WR
352
W48P
1886

THE MAYOR'S ADDRESS.

Gentlemen of the Board of Aldermen and of the Common Council.

Election to the City Council is not to be regarded as an honor chiefly to be conferred upon individuals, but rather as a selection of the persons who ought, and are presumed by their fellow-citizens, to hold the interests of the people and the prosperity of the city paramount, and to be possessed of such qualifications, aptness, and experience for the various positions of public trust, as will insure an economical, just, and efficient administration of public affairs.

To secure the accomplishment of such a result will require a knowledge of the City Ordinances, and of the laws which are to govern your action, and a thorough investigation of the many departments and the diversified interests of the city. The basis of intelligent action is gained by punctual attendance upon all committee meetings, for it is in the committee that plans and expenditures are discussed and examined in detail.

I remind you that it will be your duty to make the general appropriation for the year 1887 in the month of November next. The amounts thus appropriated should not exceed the sum actually necessary to defray the expenses of a prudent and efficient administration of the government. The object in changing the time for making the annual appropriation, from the beginning of the year to the month of November next preceding, is plainly to secure the advantages gained by the experience and knowledge acquired by the members of the needs of each department; and unless it shall be considered a serious obligation by each City Council to keep the expenditures within the sums thus appropriated, the purpose and great benefits to be derived from the change will be defeated.

I regret that there has been any departure the past year from this excellent rule.

It has many times occurred that money appropriated for a certain work has been used, without the sanction of the City Council, to complete other undertakings, the expense of which was incorrectly estimated, and the work contemplated by such order entirely omitted.

Such action is an injustice to citizens, who are warranted in assuming that an order appropriating money for a particular object will be applied only for the purpose indicated. To correct this a recent ordinance wisely provides that no appropriation made

for a specific purpose shall be used for any other object, unless by vote of the City Council.

Before any appropriation is made to begin a work, the plan and specifications and a careful estimate of the cost should be submitted by the committee having the same in charge, whether the amount asked for is to do the whole or a part of the work during the year, that the City Council may know the full extent and cost of the work contemplated, before entering upon it.

And if, at any time, a committee finds its estimate to have been incorrect, and the appropriation insufficient, they should not assume the responsibility of exceeding the sum appropriated, but at once inform the City Council, and await its action.

The monthly statement of the Auditor shows the amount of the general appropriation, the sums expended, and the amount unexpended, to its date. I recommend that in addition to these, another column of figures be added, showing the amount of expense incurred but not paid, which when deducted from the unexpended column will show the real balance available for expenditures.

There will then be placed before the City Council an exhibit of the actual standing of the accounts of each department. It will also serve as a check to the tendency to exceed the appropriations.

I recommend that the Rules and Orders of each

branch, and the Joint Rules and Orders, be referred to the appropriate committee for the necessary revision; and that a suitable edition bound with the Municipal Register be furnished the members of the City Council and City Officers.

FINANCE.

On account of transactions of the year	
1885 there is outstanding a temporary loan of	\$75,000 00
Bills unpaid	33,000 00
	<hr/>
	\$108,000 00
	<hr/>
Against which there is cash on hand,	\$55,218 93
Uncollected taxes good	61,900 00
	<hr/>
	\$117,118 93
	<hr/>
After paying all bills of 1885, there	
will be an estimated balance of un-	
appropriated moneys in the treasury	
amounting to	\$9,118 93
And due from miscellaneous sources .	10,218 41

The total amount of payments made by the City Treasurer for the year ending Dec. 31, 1885, was \$1,074,960.74, as follows:—

Ordinary city expenses	\$296,195 15
Interest	78,241 03
State, county, and bank tax	43,408 04
Sinking-fund Commissioners	48,625 48
State aid	869 00
Water construction	35,367 25
Temporary loans	410,000 00
Education	106,775 10
Funded debt matured	25,150 00
New schoolhouses	24,932 61
New armory	5,397 08
	<hr/>
	\$1,074,960 74
	<hr/>

Total receipts from all sources during the year ending Dec. 31, 1885, was \$1,084,531.76, as follows:—

City taxes	\$419,744 29
Corporation and bank taxes	47,350 30
City bonds sold	76,000 00
Premium on school bonds	1,716 00
Interest on deposits	819 24
Interest on taxes	2,092 56
Temporary loans	415,000 00
State aid	813 00
Sinking-fund Commissioners	20,000 00
Water department	61,822 53
Miscellaneous	27,561 89
Betterments Farlow Park	11,611 95
	<hr/>
	\$1,084,531 76
	<hr/>

The permanent debt of the city, Dec. 31, 1885,
was as follows:—

Town notes, 6½ per cent,	\$46,000 00	
Town notes, 6 per cent,	167,000 00	
Accrued interest .	3,062 54	
	<hr/>	\$216,062 54

These notes all mature by March 10,
1894.

Municipal bonds, 5 per cent	\$34,000 00	
Accrued interest .	850 00	
	<hr/>	34,850 00
Water bonds, 6 per cent,	\$600,000 00	
Water bonds, 5 per cent,	250,000 00	
Water bonds, 4 per cent,	147,000 00	
Accrued interest .	25,720 00	
	<hr/>	1,022,720 00
Public park bonds, 4 per cent	\$25,000 00	
Accrued interest .	250 00	
	<hr/>	25,250 00
School notes, 4 per cent,	\$46,350 00	
Accrued interest .	803 40	
	<hr/>	47,153 40
Uninvested portion of Kenrick fund . .	\$2,740 00	
Accrued interest .	49 17	
	<hr/>	2,789 17

Newton school bonds, 4 per cent	\$44,000 00
Accrued interest	440 00
Total amount of funded debt with accrued interest, Dec. 31, 1885	\$1,393,265 11
The amount of funded debt with ac- crued interest, Dec. 31, 1884, was	1,363,416 86
Increase in city debt	\$29,848 25

SINKING-FUNDS.

The condition of the sinking-funds Dec. 31, 1885, was as follows:—

City debt sinking-fund	\$24,516 20
Water debt sinking-fund	169,072 30
Public park loan sinking-fund	10,862 55
Total	\$204,451 05
Amount of sinking-funds, Dec. 31, 1884,	179,671 68
Increase in sinking-funds	\$24,779 37
Increase in the city debt for 1885	29,848 25
Total increase in funded debt for the year 1885	\$5,068 88

During the year, there has matured and been paid a note of \$20,000, which sum was paid from the city debt sinking-fund.

There will mature a town note, Oct. 3, 1886, of \$20,000, which will be provided for from the city debt sinking-fund.

There will also mature a school note, Jan. 25, 1886, of \$5,150, to be provided for from the tax levy of 1886.

In 1884, the real estate was valued at	\$20,467,295 00
Personal estate valued at	7,347,266 00
	<hr/>
	\$27,814,561 00

Taxable value of corporate stocks	\$2,746,700 00
Taxable value of bank stocks	946,970 00
	<hr/>
Total	\$31,508,231 00

In 1885, the real estate was valued at	\$21,134,820 00
Personal estate valued at	7,865,000 00
	<hr/>
	\$28,999,820 00

Taxable value of corporate stocks	\$2,650,600 00
Taxable value of bank stocks	962,870 00
	<hr/>
Total	\$32,613,290 00
Increase in taxable property in 1885,	1,105,059 00

Value of real and personal property in the city of Newton, which is exempt from taxation under the provisions of the third and seventh divisions of section 5, chap. 11 of the Public Statutes:—

Personal	\$550,165 00
Real	866,300 00
	<hr/>
Total	\$1,416,465 00

The rate of tax per \$1,000, in 1883, was as follows:—

City	\$14 28	
County	0 40	
State	0 72	
	<hr/>	\$15 40

The rate of tax per \$1,000, in 1884, was as follows:—

City	\$13 00	
County	0 40	
State	1 00	
	<hr/>	\$14 40

The rate of tax per \$1,000, in 1885, was as follows:—

City	\$12 80	
County	0 30	
State	0 90	
	<hr/>	\$14 00

READ FUND.

There was on hand Jan. 1, 1885, a balance of the income from this fund of \$903.51.

During the year there has been received the sum of \$1,608.81.

The disbursements made in accordance with the will of the generous donor were as follows:—

For a picnic for children	\$225 00
• For scientific lectures	622 50
For the free library	398 77
For poor widows of Newton	345 00
For incidentals	3 00
Total	<hr/> \$1,594 27

Leaving a balance unexpended of \$918.05.

The principal, \$40,000, is invested, bearing interest at the rate of four per cent per annum.

HEALTH.

It is gratifying to state that the City Council has adopted a recommendation made a year ago in reference to a new Board of Health.

The ordinance creating it is as follows:—

“A Board of Health is hereby established, which shall consist of the Mayor, *ex officio*, and five other persons appointed as provided by section six of the City Charter; of whom one shall be a member of the Board of Aldermen, one a member of the Common Council, and three persons not members of the City Council.

“The Board shall have and exercise all the powers which any Board of Health of the City of Newton may have by law.”

The active and comprehensive manner with which this Board has dealt with the important and often perplexing questions of the Department has fully proved the wisdom of the Act.

Its influence has been beneficial. Our citizens are becoming more interested in matters pertaining to the public health, and have a better understanding of the means to be used to improve the sanitary condition

of their homes and of the city at large. On recommendation of this Board, as a health measure, the City Council have voted to supply Station Street and Thompsonville with city water.

The collection of house offal has been regularly and satisfactorily made.

Also the contract for work of the odorless excavator has been well performed.

I recommend that vacant land of suitable size and location in each ward be rented by the city for public play-grounds, where the needed exercise and sports of boys may be properly enjoyed by them.

I renew a former recommendation, that arrangements be made to provide convenient places for bathing and swimming, for the benefit of the public. The advantages to health are apparent to all. The lakes and ponds in central locations are becoming so surrounded by residences, that the former opportunities no longer exist. Therefore there is a greater necessity for making the provision suggested.

The cost of this department for the year 1885 was \$2,280.69.

SEWERAGE.

I remind you that this subject is one of vital importance. Its magnitude, and influence upon the health and development of the city, are so great that it should receive your earnest and serious consideration.

The Metropolitan Drainage Commission, of which a prominent citizen of this city is a member; appointed by his Excellency the Governor for the purpose of investigating and reporting a plan for the drainage of the valleys of the Charles, Mystic, Neponset, and Blackstone rivers, will soon submit their report to the Legislature. The results of their investigation will be of great value in determining the best plan for the disposition of the sewage of Newton. I recommend the appointment of a special committee on sewerage, and that a reasonable appropriation be made for necessary expenditures.

PUBLIC SCHOOLS.

Our citizens justly regard general education as indispensable to the progress of mankind, a sure means to secure peace, order, and good citizenship.

Under the management of the School Board, the schools maintain their usefulness and popularity.

The superintendent and teachers rightly appreciate the important positions they occupy, and their responsibilities in the mental and moral training of the pupils under their charge.

The number of teachers employed, 93.

The total enrolment of pupils in the public schools for the year 1885 was 4,027.

The average attendance was as follows:—

SCHOOL.	Ward.	Number.
High	2	319
Eliot	1	108
Lincoln	1	35
Claffin	2	161
Adams	2	185
Jackson	2	172
Pierce	3	197
Davis	3	184
Franklin	3	146
Williams	4	232
Hamilton	4	97
Hyde	5	179
Prospect	5	198
Oak Hill	5	19
Mason	6	347
Thompsonville	6	35
Bigelow	7	280
Underwood	7	153
Total		3,047

The pupils at the Rice School are included in the enumeration of the Mason School, and the pupils of the new school at West Newton are included in the Pierce and Davis Schools.

The appropriation for schools was	.	\$106,350	00
Received from dog tax	.	1,841	45
Making	.	\$108,191	45

The expense of the School Department for the year 1885 was as follows:—

Superintendent and teachers	\$80,048 26
Janitors.	5,875 14
Secretary	300 00
Evening schools	717 54
Conveyance of pupils	900 00
Fuel	6,333 11
Furniture and incidentals	13,811 02
Total	<hr/> \$107,975 07

The evening school held at the Lincoln schoolhouse was well attended; the whole number of different pupils, mostly adults, was 110; average attendance, 62. Common English branches, including bookkeeping and mechanical drawing, are taught.

Early in the year a truant officer was employed, who has rendered prompt and faithful service.

By ordinance the Lawrence Industrial School, at Lawrence, Mass., has been designated as the place of confinement for truants.

Within the past three years four new schoolhouses, containing twenty rooms, have been built.

The cost of the buildings, land, etc., was \$96,248.76, as follows:—

Williams, Auburndale	\$35,497 81
Eliot, Nonantum	17,747 63

Rice, Newton Centre	\$21,419 63
—, West Newton.	21,583 69
The furniture for the same cost about	5,000 00

Additional school accommodation is needed at the High School, which is referred to elsewhere.

More room will soon be required at the Claffin, Adams, and Hyde Schools.

NEWTON FREE LIBRARY.

The establishment of a free library to furnish all citizens an equal opportunity for reading and study is a wise and public benefaction. It is an institution whose restraining and refining influences are widely extended.

The number of volumes in the library is 23,311. 1,456 books have been added during the year. The circulation the past year was 83,938. Of this number, 41,518 were distributed by the daily delivery, as follows:—

Newtonville	9,472
Newton Centre	8,983
Auburndale	5,709
Newton Highlands	5,349
West Newton.	4,637
Upper Falls	4,443
Lower Falls	2,498
Nonantum	427

The cost to the city of maintaining the Library for the year 1885 was \$7,498.98.

The Library has received for several years income from the following generous donations:—

Speare Fund	.	.	.	.	.	\$70 00
Jewett Fund	.	.	.	.	.	315 00
Read Fund	.	.	.	.	.	398 77

The intention, I think, of donors is to provide means to furnish extra advantages to the Library, and not to contribute to the ordinary expenses of maintenance. If this were the custom, and so understood, it would undoubtedly influence many of the liberal friends of the Library to make gifts for special departments, thus adding largely to its attractiveness and influence.

The Trustees have recommended that the Library building be enlarged to provide needed additional facilities. The estimated expense is about \$9,000.

I recommend that the city continue its contribution towards the maintenance of the free reading-room in Ward 3.

WATER DEPARTMENT.

The Water Board has pursued a well-defined and approved policy in the management of this important department, which is so intimately related to the welfare and growth of the city.

The works are in good condition; the pumping-station, reservoir, and filter-basin are well kept.

There was laid in 1885, 17,605 feet of water main, making a total of $72\frac{9}{10}$ miles.

215 services were added, making the whole number 3,134.

The number of hydrants is 444.

The average daily use of water in 1885 was 614,968 gallons.

The receipts of the Water Department for the year 1885 were \$53,846.66.

EXPENDITURES.

Maintenance	\$12,873 40
Interest on bonds	53,100 00
Sinking-fund for water debt	17,000 00
Amount of water bonds issued to date	997,000 00

From a careful calculation, it is estimated that about 15,000 of the population are supplied by city water, and about 5,000 from wells and other sources.

For the better water service of certain districts of the city now insufficiently supplied by the present reservoir, notably Chestnut Hill, Beacon-street Hill, and Institute Hill, a high-service supply is necessary.

This is a matter of great importance to these localities, and I recommend it to your careful investigation.

I recommend for your consideration the advisability of a general use of meters. By this means, the water used is accurately measured, and consumers pay for the actual quantity used. It is not only an equitable way, but would result in decreasing the wasteful use of water. Its effect would be beneficial on the water supply. The meters should be owned, furnished, and kept in order by the city, and rented to water-takers at a fair annual rate.

PUBLIC PROPERTY.

The public buildings of the City, except in some cases where faulty sanitary conditions exist, are in good condition.

To keep so many buildings in satisfactory order requires constant care and frequent small repairs.

The City Hall has been well painted, and its appearance greatly improved.

The Prospect and Hamilton schoolhouses and Steamer No. 1 House have also been painted.

Additional heating capacity has been added in several of the schoolhouses.

By order of the State inspector of buildings, a fire-escape has been placed in the Adams, and a small partition in the Claflin schoolhouse.

Your attention is particularly called to the dangerous

condition of the drainage at Hose House No. 7, Upper Falls, and at Steamer House No. 2, West Newton.

The High School has outgrown the capacity of the present building, and additional room is needed. The matter has been carefully considered by a joint committee of the School Board and Committee on Public Property, who have investigated various propositions relative to increased accommodation.

Plans of a substantial building, adapted in design and size to the purposes of the High School, have been submitted to the joint committee, and have been approved. It is proposed that a section only of the contemplated new building be built immediately, the new part to be erected in the rear of the present building.

By this plan the new portion, used in connection with the present building, will provide ample accommodation for many years to come.

While an entirely new building would undoubtedly be in many respects more satisfactory, yet under the circumstances it would be so large an expense as to be entirely unwarranted.

The building of a drill-hall for military and calisthenic purposes is also recommended.

The appropriation for this department, outside of constructing new buildings, was \$10,000; the amount expended was \$11,315.23.

The excess was largely in consequence of work ordered by the State Inspector of Buildings.

PARKS.

The work upon Farlow Park has been completed in accordance with plans adopted by the City Government. The total cost of the park is \$40,655.35, less the amount of betterments, \$14,181.99, and sale of buildings, etc., \$3,150.50; making an actual cost to the city of \$23,322.86. To the expense of maintenance should be added the interest on \$25,000 four per cent park bonds due April 1, 1908. The park contains about three and one-fourth acres.

A number of the smaller parks have been re-graded, furnished with trees, and otherwise ornamented. The amount expended on the parks for the year 1885 was \$9,860.85. I am gratified to state that an appropriation has been made for the adornment of our highways, by setting out shade-trees along the roadsides connecting the various villages.

STREET LIGHTS.

The large number of petitions received for additional street lights indicates the requirement and appreciation of the public for well-lighted streets.

The whole number of street lights is 1,313, of which 790 are supplied with gas, and 523 are supplied with oil. 80 new lights have been added during the past year.

The extra large lights in some of the public squares are a great convenience to travellers, and a valuable aid to the night patrolmen. These lights and those at the drinking-fountains should be left burning all night; by a simple automatic arrangement, they can be made self-extinguishing. Prompt attention should be given to the necessity of lighting the streets every night when artificial light is needed.

The cost of this department for the year 1885 was \$20,493.66.

The fuel supplied for the public buildings cost \$4.88 per ton, the expense for the year being \$5,811.58.

The contract for the street lights expires May 14, 1887. I recommend, before making another contract, that a special examination be made as to the adaptability and cost of electric lighting for a portion of the streets.

FIRE DEPARTMENT.

The duties of this Department have been performed with characteristic promptness and efficiency.

The Fire Alarm has been maintained in excellent order.

The apparatus is all in good working condition except Steamer No. 2, which needs a new boiler. It has been in service for 14 years.

It will be necessary to purchase additional fire-hose, probably about 1,500 feet, early in the year.

During the year the Department has responded to 83 alarms, being 32 more than in the previous year.

In addition to the above, 10 fires have been extinguished by the police and citizens without alarm.

The loss resulting from these fires was as follows:—

Loss on buildings	\$13,175 00
Insurance paid	11,462 00
Loss on contents	6,151 73
Insurance paid	3,771 73
Loss over insurance paid	4,093 00
Total insurance at risk	157,200 00
Assessed valuation of real estate at risk	167,100 00

Two new fire-alarm signal boxes have been added during the year, making the total number 53.

11 hydrants have been added, increasing the number now in use to 444. The Chief of Department recommends the addition of 13. The locations suggested by him are well selected.

Many citizens of Wards 1 and 2 request that a tower striker be placed in some suitable locality at Nonantum, on or near either of the great mills there. They desire the benefit of it not only to obtain the fire alarms readily, but also to accommodate the schools.

I would suggest to mill-owners the advisability of placing private fire-alarm boxes upon their premises for their exclusive use, with which the Fire Department will make connection.

I renew a recommendation previously made, that the various schoolhouses be provided with private fire-alarm signal boxes.

The Chief recommends the placing in reserve one of the steamers, and the purchase of a chemical engine. He suggests that the contemplated repairs upon Steamer 2 may be delayed, and the money used to make such purchase. The recommendation should receive your very careful consideration.

From my observation of the workings and advantages of chemical engines, I have no hesitation in saying that I regard them as superior fire extinguishers.

The appropriation for this Department for the year 1885 was \$22,900; the amount expended was \$24,752.17.

HIGHWAY DEPARTMENT.

It has been the practice in Newton, for many years, to maintain superior roads. The demand for them has become so general that it is apparently a necessity with our citizens.

This extensive and growing department involves the expenditure of large sums of money, and great care and skill in its management. The amount of the general appropriation for highways, for the year 1885, was \$89,600.

EXPENDITURES.

Curbing.	\$2,463 75
Drains and culverts	5,791 14
Gravel land	3,296 58
Highway general repairs	54,286 92
Widening and reconstruction	21,110 67
Land damage	3,595 71
Sidewalks and crossings	11,737 82
Making a total of	<u>\$102,282 59</u>

To maintain the streets in good order, I believe it to be essential that the plan should be adopted and adhered to, of taking good care of what we have; of thoroughly repairing and redressing the roads at the beginning of the year before other work is begun. This would not only insure a uniformly good condition of the streets, but would also result in a great saving, by preventing the deterioration of our highways which are so expensive to rebuild.

Thorough and permanent work should be done upon our streets, but great discrimination is necessary to determine the appropriate quality and plan to be adopted. Careful and correct estimates of the cost should be made.

It appears to me that the tendency is towards doing new work too expensively. So much time and money are applied to a small space, that a very large extent of streets greatly needing repairs is neglected.

The general average condition of the highways is not kept up to the standard required by the amounts expended.

One serious element of cost which has existed in this department for many years is the beginning of too many different pieces of work at the same time, and without sufficiently definite plans.

It would be far cheaper and give better satisfaction, when a work is begun, to put a sufficient force upon it to carry all the various parts along together. It would be completed in less time, and at much less expense.

There should be a systematic method of book-keeping in this department, with appropriate ledger accounts; the items to be promptly entered and posted, so that the nature of the work and amounts expended may be easily obtained.

In reference to contract work in this department, my opinion is that the city, with its costly and complete equipment, with abundant material adapted and accessible for doing good work, ought, with proper management, to produce a better quality of work, and at a lower figure, than would be probable by contract work.

In the employment of men in the various departments of the city, preference should always be given to citizens.

I call your attention particularly to the fact that

many of the concrete sidewalks are out of repair, and in some cases dangerous. Public safety requires that the defects be promptly remedied.

CITY ENGINEER.

The work of this Department has been routine in character, yet the demands upon the office have been constant and numerous.

In the laying out and construction of new streets, and improvements likely to become public and to be maintained at the expense of the city, it is desirable that the preliminary steps be carefully taken. The subdividing of properties, and the grade and quality of streets, should be in accordance with carefully prepared plans, so that the various conditions and interests may be adjusted advantageously to land-owners and to the City, and the construction, drainage, and maintenance of the streets reduced to the least necessary cost. I recommend that the City Engineer be authorized to co-operate with citizens in the selection of plans, and establishment of grades of new streets, so that when completed they may be acceptable to the City.

The cost of this Department for the year 1885 was \$6,750.

POOR DEPARTMENT.

The arrangements for caring for those who are dependent upon the city for whole or partial support are ample and comfortable.

Under the care of the Matron and Warden, the Almshouse and Farm are well conducted.

The number of inmates at present at the Almshouse is 30.

This number is likely to be increased in the winter months.

About the usual amount of outside assistance has been given.

The Board of Overseers direct this beneficent work with discretion and kindly consideration.

The cost of maintaining the Almshouse for the year 1885 was \$4,044.41; the cost of aid to poor outside the Almshouse for 1885 was \$8,500.15.

To facilitate the work of the farm, two narrow wooden bridges have been built across the tracks of the railroad which runs through it.

The city farm contains about fifty-eight acres, and is located in such close proximity to the new railroad that it seems probable, that, in a few years, the land will be marketable at a price which will make it desirable to seek another location.

It is understood that the Newton Circuit Railroad will be in operation about October next.

CLAFLIN GUARD.

The new armory recently provided for our military organization was completed and occupied during May last.

The building was thoroughly fitted up, is in every way well adapted for the purposes of the Company, and is probably one of the best armories in the State.

The cost of the armory was \$12,000.

The length of service of the commanding officer has brought our Company to the right of the line in the Regiment. This fact, with the marked abilities of the Captain, and the military qualities of the other members, give a gratifying rank to the organization.

The net cost to the City for the year 1885 was \$421.80.

POLICE DEPARTMENT.

This Department, instituted for the protection of life and property, and for the maintenance of good order, has performed effective service.

The present force consists of a Marshal, Sergeant, and sixteen Patrolmen.

As a matter of better protection and public requirement, I recommend an addition of two Patrolmen the present year.

The several Police Stations are in neat and convenient order.

During the year 480 arrests have been made for various causes.

Twelve hundred tramps have been lodged and fed, a number 300 less than the year previous.

The force has been diligent in prosecuting violators of the law. The aid rendered the Department by his Honor, the Standing Justice of the Police Court, is hereby acknowledged.

It will be my determination, as in the past, to faithfully perform my duty, and to maintain the excellent reputation of Newton for temperance and obedience to law.

The cost of the Department for the year 1885 was \$19,498.17.

CONCLUSION.

I have reviewed, in a general way, the condition and work of the several departments. A more detailed statement you will obtain from the several reports of city officers which should soon be furnished you. Let us now address ourselves to the important duties we have been delegated to perform, with a just appreciation of our responsibility, and of our accountability as public servants.

CITY OF NEWTON.

ANNUAL REPORT

OF THE

CHIEF OF FIRE DEPARTMENT

OF THE

CITY OF NEWTON

FOR THE

YEAR ENDING DEC. 31, 1886.

WITH A STATEMENT OF THE FIRES AND ALARMS; ALSO, LOSSES
AND INSURANCE DURING THE YEAR.



Newton:

PRESS OF THE NEWTON JOURNAL.
1887.

CITY OF NEWTON.

IN THE BOARD OF MAYOR AND ALDERMEN, Jan. 17, 1887.
Accepted and sent down.

I. F. KINGSBURY, *Clerk.*

IN COMMON COUNCIL, Jan. 17, 1887.
Accepted in concurrence.

ALBERT S. GLOVER, *Clerk.*

REPORT OF THE CHIEF OF FIRE DEPARTMENT.

FIRE DEPARTMENT HEADQUARTERS,
OFFICE CHIEF OF DEPARTMENT,
CITY HALL, Dec. 31, 1886.

*To the Honorable the Mayor and City Council of the City of
Newton :*

GENTLEMEN—I have the honor herewith to submit to you the Annual Report of the Fire Department for the year ending December 31, 1886, the same being my eighth, and the twelfth of the present system.

I am pleased to report that no serious fires have occurred, the promptness of the department, when called, resulting in their extinguishment or control to the buildings in which they originated.

During the year 37 buildings were damaged by fire as follows :

Totally destroyed	.	.	.	.	.	5
Partially damaged	.	.	.	.	.	13
Slightly do.	.	.	.	.	.	19

For loss, insurance, &c., upon buildings and contents see appendix

The department has answered to the following calls :

First alarms	.	.	.	.	.	41
Second	.	.	.	.	.	3
Stills	.	.	.	.	.	19
Telephone	.	.	.	.	.	7
Special out of city	.	.	.	.	.	1
Total	.	.	.	.	.	71

In response to the above calls the department has rendered the following service :

Hose used	29,150 ft.
Ladders used	1,314 ft.
Miles travelled	707
Duration of service	313 hrs.

MANUAL FORCE.

The manual force of the department is made up of the following officers, employees and members at call :

OFFICERS AND EMPLOYEES.

Chief of Dept. and Supt. Fire Alarm . . .	1
Asst. Chief, in charge of fire alarm . . .	1
Engineers in charge of steam fire engine . .	2
Engineer in charge of chemical and reserve steam fire engine	1
Drivers	5

CALL FORCE.

Foremen of companies	8
Assistant Foremen of companies	8
Firemen	2
Truckmen	10
Hosemen	34
<hr/>	
Total	62
Grand total	72

APPARATUS IN SERVICE.

Steam fire engines	2
Hose reels	7
Chemical engine	1

Truck	1
Coal tenders	3

IN RESERVE.

Steam fire engine (complete)	1
Hose reel	1

IN CHARGE OF CHIEF AND ASST. CHIEF OF DEPARTMENT.

Buggies	2
Sleighs	2
Wagon	1

VALUE OF DEPARTMENT PROPERTY.

Buildings and land	\$86,000
Apparatus, horses and furniture	28,000
Fire alarm telegraph	24,000
Total	<u>\$138,000</u>

The apparatus has been maintained in perfect working order.

The City Council and Joint Standing Committee on Fire Department have authorized the following purchases and repairs :

One 50 gallon, double-tank improved champion chemical engine.

1,200 feet new hose.

1,500 feet old hose re-lined.

One pair horses.

Repair of No. 5 reel.

CHEMICAL ENGINE.

The Improved No. 4 Champion Chemical Engine, which was purchased of the Fire Extinguisher Manufacturing Company, of Chicago, and placed in service at No. 2 Engine Sta-

tion, June 25, this year, has proved an extremely valuable piece of apparatus and a decided acquisition to the department.

The following record of its work from July to December 31 is herewith submitted :

Fires and alarms attended	26
Fires extinguished by chemical, unaided	4
Fires at which effective service was rendered	13

The claims made for this style of apparatus have, I trust, been satisfactorily shown to those of our citizens who may have witnessed its work, and still better results may be expected in the year to come. No claim is advanced that this engine will extinguish conflagrations, but the promptness with which it can be placed in service prevents fires which otherwise would result in serious injury and excessive water damage, and will assist very materially in reducing the losses to a minimum.

HORSES.

The general condition of the department horses, with the exception of Reel horses 1 and 3 and the off horse attached to Chemical A is excellent. The horses referred to are no longer fit for the service and should be replaced with new ones at an early day.

Your attention is respectfully called to the report of the department veterinarian herewith annexed.

HOSE.

All of the companies, with the exceptions of 5 and 6, have full complements of reliable hose. The companies referred to have in service the last of the old leather hose, none of which will withstand a pressure exceeding 60 pounds,

and should be immediately replaced with new hose. I would recommend that 1,500 feet of white Anchor rubber hose be purchased and apportioned to these companies. For statement of amount of hose on hand, condition and where distributed, see appendix.

STATIONS.

All of the stations are in general good repair, and no large outlay will be required.

No. One Station—The front doors should be widened, and the Police Station removed from the building.

No. Two Station—The coving and gutters require repairs, and some system of drainage other than that now in use should be adopted.

No. Three Station will require no expenditures, being in excellent repair.

No. 1 Truck Station should be provided with new front doors.

Stations Five, Six and Seven are in good repair.

Stations One, Two, Three and No. 1 truck will require new floors in the apparatus rooms in 1888.

WATER SERVICE.

The same careful supervision by the Superintendent of Water Works of this department continues, everything pertaining to the same being at all times in readiness for immediate use. Twenty-seven new hydrants have been added during the year, making a total of four hundred and seventy-one.

I would suggest that the main on River street be extended from Pine street to Lexington street for fire protection to a large property which is now deprived of water facilities. I would also suggest the connecting of the

Grove and Washington street mains, as in case of breaks the territory bounded by the river on three sides at Lower Falls is entirely cut off.

Additional hydrants are necessary in the following streets:

- Pearl and School streets.
- Emerson, between Pearl and Boyd streets.
- Bacon and Pearl streets.
- Walnut Park and Washington streets.
- Carlton, 410 West Centre street.
- Washington and Adams streets.
- Park, opposite Elmwood street.
- Eldredge and Elmwood streets.
- Newtonville avenue and Centre street.
- Bennington and Centre streets.
- Centre, between Franklin and Bellevue streets.
- Centre, opposite Fairmount avenue.
- Waverly avenue, between Franklin and Sargent streets.
- Kenilworth street and Waverly avenue.
- Ivanhoe, between Montrose and Kenilworth streets.
- Montrose, between Ivanhoe and Waverly avenue.
- Crafts, 500 feet from Washington street.
- Crafts, between Linwood avenue and Watertown street.
- Crafts and Walnut streets.
- Linwood avenue and Walnut street.
- Prescott, between Lowell and Central avenue.
- Cabot and Walnut streets.
- Walnut and Russell place.
- Bowers and Harvard streets.
- Lowell, 500 feet north of Washington street.
- Brooks avenue and Washington street.
- Watertown, 300 feet west of Cross street.
- Waltham, 400 feet south of Derby street.

Webster, between Waltham and Cherry streets.
 Washington, 400 feet east of Davis street.
 Alpine, 500 feet west of Mount Vernon street.
 Woodland avenue, 300 feet west of Washington street.
 Fern and Central avenue.
 Maple and Auburn.
 Auburn, between Lexington and Melrose streets.
 Melrose, between Seaverns and Auburn streets.
 Walcott and Lexington streets.
 Washington street, opposite entrance Cottage Hospital.
 Concord, 300 feet west of Washington street.
 High and Summer streets.
 Pettee and High streets.
 Chestnut, 800 feet north of Boylston street.
 Chestnut street and railroad bridge.
 Elliott street and railway bridge.
 Erie avenue and Woodward street.
 Bowdoin and Lincoln streets.
 Lake and Hyde avenues.
 Centre, between Walnut and Boylston streets.
 Hartford and Lincoln streets.
 Walnut and Lincoln streets.
 Hammond and Kingsbury streets.
 Willow, between Centre and Station streets.
 Beacon, between Centre and Station streets.
 Centre street, opposite Clinton place.
 Beacon street, 100 feet west of Centre street.
 Centre, between Pelham and Beacon streets.
 Homer, between Morton and Cedar streets.
 Ward, opposite Sumner street.
 Ward street, 300 feet west of Grant avenue.
 Centre and Rice streets.
 Centre and Pleasant streets.

APPROPRIATION.

The appropriation for the maintenance of this department for the fiscal year ending December 31, 1886, as authorized by the City Council, was \$26,000, and the expenditures were as follows:

Salaries	\$15,665 46
Hay, grain and shoeing	3,031 63
Chemical engine and supplies	2,114 38
Hose	1,200 00
Coal and wood	863 73
Fire alarm maintenance	762 87
Gas	364 49
Repairs to apparatus	286 62
Veterinary and medicine	252 65
Water tax for stations	201 00
Laundry	185 82
Incidentals as per books of auditor	1,830 77

RECOMMENDATIONS.

I would renew the recommendations of previous years for permanent drivers for Reels One, Three, Five, Six and Seven. It is neither economy, nor good judgment, to longer countenance this drawback to the promptness and efficiency of the department

I would suggest that the alterations and maintenance of the several stations be placed under the control of the Joint Standing Committee on Fire Department as the proper custodians, and that the expenditures for such work be charged to the general appropriation for this department. With this arrangement necessary repairs and alterations can be more intelligently carried out, and the actual expense of the department more correctly shown.

The proper discipline and appearance of the department employees requires that they should be uniformed, and I would ask that the same be adopted at an early day.

I would recommend the substituting of incandescent lights for gas in the "Apparatus Rooms" at Stations One, Two, Three and One Truck. Under the present arrangement these rooms are very imperfectly lighted.

ACKNOWLEDGMENTS.

I desire to express to His Honor, the Mayor, and to the Chairman, Alderman George Pettee, and members of the Joint Standing Committee on Fire Department, a deep sense of gratitude for the earnest and hearty co-operation tendered me in my official position.

To Assistant Chief Walter B. Randlett my sincere acknowledgments are tendered for the faithful and conscientious discharge of the duties pertaining to the position and the perfect confidence reposed in the present incumbent.

To the officers and members of the force I have only words of commendations for their manly and straightforward attention to duty.

Also to the several heads of departments and their assistants for courtesies tendered.

Respectfully submitted,

HENRY L. BIXBY,

Chief of Department.

FIRE ALARM TELEGRAPH.

The Fire Alarm Telegraph in charge of the Assistant Chief has rendered prompt and effective service throughout the year, and the operator is deserving of special commendation for his attention to its exacting duties. The labors in this department have increased two-fold the past year, and

the introduction of electric light and power circuits will greatly add to its responsibilities.

The dangers attending this innovation for light and power have already been demonstrated throughout the country in the added destruction of property by fire and loss of life directly chargeable to this powerful but dangerous element.

Forty-one first alarms, three second alarms, one special call and eight hundred and thirteen test and school signals have been correctly sent out.

Upon recommendation of the Joint Standing Committee five additional signal stations for 1887 will be purchased and located as follows :

Vernon and Eldredge streets.

Centre and Elmwood streets.

Washington Park.

Margin street and B. & A. Railway.

Centre, between Pelham and Beacon streets.

During the year three new signal stations were placed in circuit, as follows :

224—Nonantum Worsted Mills.

54—Opposite Cottage Hospital.

333—Office Superintendent Schools, for school signals.

One No. 4 Bell Striker, placed upon No. 6 Hose Station.

Four sets coils for open circuits.

The present system consists of sixty miles of aerial wire placed upon 843 poles and divided into four circuits, upon which there are fifty-five signal stations and eight tower bells. The constant extending of the circuits, together with additional signal stations, have already taxed the present system beyond the limit requisite to its reliability. I would suggest a careful consideration of the present and future needs of this branch of the service, with a

recommendation that a new ten-circuit repeater be provided for 1888.

The following is a summary of outside labor performed :

New poles set	29
Old poles set	10
Poles moved and reset	20
Old poles taken down	18
New wire strung, No. 9 iron	2 miles.
New wire strung, No. 12 copper	1 mile.
New wire strung, No. 14 iron, police line	3 1-2 miles.
New wire strung, No. 12 iron, police line	1 mile.
Old wire taken down, No. 9 iron	2 miles.

TELEPHONE DEPARTMENT.

This department has been maintained with but slight additions. The Police Circuit has been extended to the Highlands and Newton Upper Falls.

The Fire Department Circuit is too heavily taxed to render effective service, but with the transfer of the Water Department to a separate circuit it is hoped to improve the service.

This system comprises sixteen miles of wire for Fire Department use, nine miles for Police and four miles for Water Department (not in use), with a total of twenty-two stations.

HENRY L. BIXBY,
Superintendent.

WALTER B. RANDLETT,
Operator.

BUILDING DEPARTMENT.

Two hundred and nine buildings have been erected or enlarged during the year, of which one hundred and ninety-three were of wood, and sixteen of stone and brick.

These buildings are classed as follows:

Dwellings	.	.	.	.	.	.	.	.	.	175
Stables	.	.	.	.	.	.	.	.	.	17
Stores	.	.	.	.	.	.	.	.	.	4
Railway stations	.	.	.	.	.	.	.	.	.	3
Chapels	.	.	.	.	.	.	.	.	.	2
Shops	.	.	.	.	.	.	.	.	.	2
Electric Light Stations	.	.	.	.	.	.	.	.	.	1
Storehouse	.	.	.	.	.	.	.	.	.	1
Public Library	.	.	.	.	.	.	.	.	.	1
Schools	.	.	.	.	.	.	.	.	.	1
Conservatory	.	.	.	.	.	.	.	.	.	1
Boathouse	.	.	.	.	.	.	.	.	.	1

and located as follows:

Ward One	.	.	.	.	.	.	.	.	.	18
Ward Two	.	.	.	.	.	.	.	.	.	49
Ward Three	.	.	.	.	.	.	.	.	.	41
Ward Four	.	.	.	.	.	.	.	.	.	29
Ward Five	.	.	.	.	.	.	.	.	.	26
Ward Six	.	.	.	.	.	.	.	.	.	36
Ward Seven	.	.	.	.	.	.	.	.	.	10

The approximate value of the above buildings is estimated at eight hundred thousand (\$800,000) dollars.

HENRY L. BIXBY,

Inspector.

To Henry L. Bixby, Chief of Fire Department:

The animals have in the main been free from any of the serious ailments common to them. There will, among such a number of horses, always be one or more that will show the effects of age or of their general condition, rendering them less fitted for their work or perhaps making them totally unfit for efficient service.

The Hose horse at No. 3 Station had better be retired as aged and at the same time not reliable unless carefully driven.

The pair belonging to the Chemical Engine had to be broken up in the summer, as the off horse had become so affected with a chronic form of disease as to render him fit only for slow work. The horse now in his place, while faithful and honest, is neither fitted for the place nor a mate for the near horse. I would therefore suggest that the easiest way out of the matter would be the purchase of a new pair and the retention of the old horse for the hose carriage.

The general sanitary condition of the stables is good.

I have made during the year forty-nine (49) weekly and thirty-five (35) extra visits.

The cases attended to have been :

[illegible]

Lymphangitis	.	.	.	.	.	.	.	.	2
Quarter cracks	.	.	.	.	.	.	.	.	2
Shoeing	.	.	.	.	.	.	.	.	2

Respectfully submitted,

MADISON BUNKER,

Department Veterinarian.

LIST OF SALARIES PAID TO OFFICIALS, EMPLOYEES AND MEMBERS.

Chief of Department, per year	.	.	.	\$1,500 00
Assistant Chief, per year	.	.	.	1,000 00

EMPLOYEES.

Two engineers of engines, per year, each	.	\$950 00
One engineer in charge of Chemical A, per year		950 00
Four drivers, per year, each	.	750 00
One driver, per year, each	.	600 00

CALL MEMBERS.

Foremen of companies, per year, each	.	\$110 00
Assistant foremen of companies, per year, each		105 00
Hose and truckmen	.	100 00
Firemen	.	100 00

JOINT STANDING COMMITTEE ON FIRE DEPARTMENT.

Alderman George Pettee, Chairman.

Alderman Samuel L. Powers.

Councilman W. B. Atherton.

Councilman Frank Edmands.

Councilman Andrew J. Fiske.

OFFICERS OF THE DEPARTMENT.

Henry L. Bixby, Chief of Department.

Walter B. Randlett, Assistant Chief of Department.

APPENDIX.

ROSTER OF COMPANIES.

No. 1 Engine.

STATION.—WASHINGTON, OPP. NONANTUM STREET.

FIRST-CLASS DOUBLE HUNNEMAN ENGINE.

Badge.	NAME.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
15	F. D. Graves . . .	Foreman at call,	29	Carleton street.	Printer.
16	C. W. H. Boulton .	Assistant, "	33	Fayette street.	Carpenter.
17	R. J. Morrisey . .	Hoseman, "	38	Centre street.	Carpenter.
7	John McCammon . .	Hoseman, "	31	Richardson street.	Merchant.
14	E. W. Lyons . . .	Hoseman, "	30	Centre street.	Plumber.
6	J. F. Horrigan . . .	Hoseman, "	26	Washington street.	Blacksmith.
11	Walter Pingree . . .	Hoseman, "	28	At Station.	Carpenter.
5	A. Carley	Hoseman, "	21	At Station.	Painter.
4	H. C. Lindley	Hoseman, "	41	At Station.	Painter.
EMPLOYEES.					
2	F. E. Judkins . . .	Engineer	42	At Station.	Permanent.
12	John Deery	Driver	29	At Station.	Permanent.

Chemical A. and Hose 2.

STATION.—WASHINGTON STREET, OPP. LINCOLN PARK.

Badge.	NAME.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
21	G. H. Haynes . . .	Foreman at call,	51	Webster Park.	Carpenter.
23	F. H. Humphrey . .	Assistant, "	41	Webster street.	Merchant.
26	J. Q. A. Hawkes . .	Hoseman, "	60	Webster street.	Painter.
24	W. H. Nichols . . .	Hoseman, "	41	Waltham street.	Carpenter.
20	J. Cummings	Hoseman, "	28	Washington street.	Janitor.
28	P. E. Ellis	Hoseman, "	27	At Station.	Carpenter.
19	G. K. Stacy	Hoseman, "	24	At Station.	Carpenter.
29	R. J. Riley	Hoseman, "	26	At Station.	Carpenter.
22	C. M. Kebbe	Hoseman, "	33	Henshaw street.	Carpenter.
EMPLOYEES.					
17	R. S. Cummings . .	Engineer	36	At Station.	Permanent.
18	C. L. Berry	Driver	37	At Station.	Permanent.

No. 3 Engine.

STATION.—WILLOW STREET.

SECOND-CLASS DOUBLE AMOSKEAG ENGINE.

Badge.	NAME.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
35	A. I. English . . .	Foreman at call,	39	Centre street.	Carpenter.
41	S. F. Chadbourne .	Assistant, "	37	Willow street.	Carpenter.
42	C. B. Geary . . .	Hoseman, "	39	Lyman street.	Carpenter.
33	D. McDonald . . .	Hoseman, "	37	Centre street.	Carpenter.
44	C. J. Polly	Hoseman, "	29	Lyman street.	Carpenter.
36	C. E. Thompson . .	Hoseman, "	27	At Station.	Carpenter.
46	J. McMahon . . .	Hoseman, "	29	Station street.	Blacksmith.
37	W. B. Polly	Hoseman, "	21	At Station.	Clerk.
73	C. A. Peck	Fireman, "	28	At Station.	Painter.
EMPLOYEES.					
32	A. D. Colby	Engineer, . . .	54	At Station.	Permanent.
43	A. C. Jewett	Driver	27	At Station.	Permanent.

No. 1 Truck.

STATION.—WASHINGTON AND WALKER STREETS.

Badge.	NAME.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
62	W. S. Higgins . . .	Foreman at call,	39	Brooks avenue.	Carpenter.
60	F. B. Sisson	Assistant "	48	Washington street.	Carpenter.
66	J. H. Williams . . .	Truckman, "	50	Washington street.	Painter.
87	O. Dow	Truckman, "	42	Murray street.	Plumber.
68	T. C. Nickerson . .	Truckman, "	40	Lowell street.	Carpenter.
63	H. J. Williams . .	Truckman, "	23	At Station.	Painter.
65	U. H. Dyer	Truckman, "	34	Lowell street.	Merchant.
64	J. Beals	Truckman, "	37	Washington street.	Merchant.
69	J. Watts	Truckman, "	30	Murray street.	Carpenter.
70	J. F. Horrigan . . .	Truckman, "	43	Washington street.	Painter.
61	C. Coleman	Truckman, "	40	Allston street.	Carpenter.
71	M. McLeod	Truckman, "	30	Allston street.	Carpenter.
EMPLOYEE.					
59	Chas. Murphy . . .	Driver	31	At Station.	Permanent.

No. 4 Hose.

STATION.—WASHINGTON, AND WALKER STREET.

Badge.	EMPLOYEES.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
52	E. C. Waterhouse	Foreman at call,	33	Wash'n & Walnut.	Carpenter.
47	A. J. Wandless . . .	Assistant, "	42	Allston street.	Carpenter.
50	D. Archibald. . . .	Hoseman, "	31	At Station.	Shoemaker.
51	F. A. Dexter. . . .	Hoseman, "	30	At Station.	Clerk.
49	F. Lancaster. . . .	Hoseman, "	37	At Station.	Carpenter.
EMPLOYEES.					
48	J. E. Watson . . .	Driver	31	At Station.	Permanent.

No. 5 Hose.

STATION.—AUBURN, BETWEEN MELROSE AND WOODBINE STREETS.

Badge.	NAME.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
55	J. F. Washburn . .	Foreman at call,	28	At Station.	Painter.
58	J. U. Kimball . . .	Assistant, "	40	At Station.	Carpenter.
54	J. M. Taylor . . .	Hoseman, "	29	At Station.	R. R. Empl'e
57	J. Frost	Hoseman, "	50	Auburn street.	Shoemaker.
56	C. G. Fletcher . . .	Hoseman, "	40	Central street.	Painter.
53	W. C. Spaulding . .	Hoseman, "	24	At Station.	Clerk.

No. 6 Hose.

STATION.—WASHINGTON AND HAMILTON STREETS.

Badge.	NAME.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
75	Bernard Early . . .	Foreman at call,	30	Wash. & Wales sts.	Paper mak'r
77	H. H. Miles	Assistant, "	33	Grove street.	Carpenter.
76	D. J. Corcoran . . .	Hoseman, "	25	At Station.	Carder.
79	P. E. O'Neil	Hoseman, "	30	At Station.	Fireman.
78	D. J. Cooney	Hoseman, "	25	At Station.	Carpenter.
74	T. E. Healy	Hoseman, "	30	Wash. & Wales sts.	Painter.

No. 7 Hose.

STATION.—PETTEE STREET.

Badge.	NAME.	RANK.	AGE.	RESIDENCE.	OCCUPATION.
82	W. S. Cargill. . . .	Foreman at call,	40	High street,	Carpenter.
84	H. A. Smith	Assistant, "	33	Rockland place,	Carpenter.
81	J. E. Trowbridge . .	Hoseman, "	50	High street,	Merchant.
80	J. T. Thomason . . .	Hoseman, "	39	Chestnut street,	Merchant.
83	G. H. Osborn. . . .	Hoseman, "	39	Summer & High sts,	Moulder.
86	C. E. Rand.	Hoseman, "	31	At Station.	Machinist.

Statement of Duty Performed By Each Company.

COMPANY.	LADDERS.	HOSE.	MILES.	DURATION OF SERVICE.
Engine One.		4,700 feet.	51	52 hours.
Engine Three.		5,150 "	53	47 "
Chemical A.	192 ft.	1,855 "	97	34 hours (six months).
Hose Two.		3,300 "	69	47 hours.
Hose Four		7,300 "	54	36 "
Hose Five		1,400 "	17	8 "
Hose Six		1,700 "	40	30 "
Hose Seven		3,000 "	51	30 "
Truck One	1,122 ft.	. . . . .	114	50 "
Total	1,314 ft.	28,405 feet.	546	334 "

Statement of Hose, Quantity, Quality and Where Distributed.

COMPANY.	COTTON.	RUBBER.	LEATHER.	CONDEMNED.
Engine Once	1,500 feet.	. . . . .	. . . . .	Good.
Engine Three	1,500 "	. . . . .	. . . . .	Good.
Chemical A . . . . .	. . . . .	300 feet.	. . . . .	Good.
Hose Two	1,500 feet.	. . . . .	. . . . .	Good.
Hose Four	1,400 "	. . . . .	. . . . .	Good.
Hose Five . . . . .	. . . . .	. . . . .	1,000 feet.	Condemned.
Hose Six . . . . .	. . . . .	. . . . .	1,200 feet.	Condemned.
Hose Seven	1,200 feet.	. . . . .	. . . . .	Fair.
On hand . . . . .	. . . . .	. . . . .	800 feet.	Condemned.
Total	7,100 feet.	300 feet.	3,000 feet.	. . . . .

FIRE ALARM DEPARTMENT.

CITY BUILDING, WILLOW STREET.

WALTER B. RANDLETT, Operator.

LOCATION OF TOWER BELLS.

BUILDING.	STREET.	WEIGHT.
Congregational Church . . .	Centre street	3,600 lbs.
Methodist Church	Walnut street	1,200 "
City Hall	Washington street	2,650 "
Congregational Church . . .	Hancock street	3,250 "
Methodist Church	Summer street	1,500 "
Congregational Church . . .	Hartford and Lincoln streets. . .	1,500 "
Mason School	Centre street	2,000 "
No. 6 Hose Station	Washington and Hamilton streets.	727 "

LOCATION AND SIZE OF GONGS.

No. 1 Engine Station	15-inch.
No. 2 " "	15 "
No. 3 " "	15 "
No. 1 Truck "	16 "
No. 4 Hose "	16 "
No. 5 " "	8 "
No. 6 " "	15 "
No. 7 " "	16 "
Residence of Chief of Department	8 "
Residence of Assistant Chief	8 "
Residence of Otis Pettie (private)	8 "
Works of M. G. Crane (private)	16 "
Pumping Station	8 "
Residence City Marshal	8 "

SIGNAL STATIONS.

STATIONS.

12. Park and Church streets, Newton.
13. Sargent and Centre streets, Newton.
14. Washington and Jewett streets, Newton.
15. No. 1 Engine Station, Newton.
16. Church and Centre streets, Newton.
17. School and Pearl streets, Newton.
18. Newtonville avenue and Howard street, Newton.
112. Washington street and Hunnewell Park, Newton.
113. Tremont and Belmont streets, Newton.
21. No. 1 Truck Station, Newtonville.
23. Washington and Walnut streets, Newtonville.
24. Chapel and Watertown streets, Nonantum.
25. Lowell and Watertown streets, Newtonville.
26. Walnut street, opposite High School, Newtonville.
27. Highland avenue and Allston street, Newtonville.
28. Walnut and California streets, Newtonville.
212. Watertown and Parsons streets, Newtonville.
224. Nonantum Worsted Mills Nonantum. (P.)
31. Waltham and Washington streets, West Newton.
32. River and Pine streets, West Newton.
34. Waltham and Derby streets, West Newton.
35. No. 2 Engine Station, West Newton.
36. Fuller and Washington streets, West Newton.
37. Hillside avenue and Otis street, West Newton.
312. Police Headquarters, City Hall, West Newton.
4. Auburn and Lexington streets, Auburndale.
41. Auburn and Charles streets, Riverside.
42. Woodland avenue and Grove street, Auburndale.
43. Ash and Islington streets, Auburndale.
45. Auburn and Greenough streets, Auburndale.
421. Hancock and Fern streets, Auburndale.
5. No. 6 Hose Station, Lower Falls.
51. Washington and Concord streets, Lower Falls.
52. City Farm.
53. Grove street and Pine Grove avenue, Lower Falls.
54. Entrance Cottage Hospital, Lower Falls.
512. C. F. Crehore & Son, Paper Mills (private), Newton Lower Falls.
6. No. 7 Hose Station, Upper Falls.
61. Chestnut and Winter streets, Upper Falls.
62. Chestnut and Oak streets, Upper Falls.
63. Mechanic and Elliott streets, Upper Falls.
64. Walnut street, rear B. & A. Railway Station, Highlands.
65. Cook and Boylston streets, Highlands.

612. Office Pettee Machine Co. (private), Upper Falls.
7. Station street and Glen avenue, Newton Centre.
71. Walnut street and Cemetery Gate.
72. M. G. Crane's Factory (private), Highlands.
73. No. 3 Engine Station, Newton Centre.
74. Beacon street and Laurel avenue, Newton Centre.
75. Cypress and Paul streets, Newton Centre.
8. Beacon and Hammond streets, Chestnut Hill.
81. Ward street and Waverly avenue, Newton Centre.
82. Kenrick street and Waverly avenue, Newton.
9. Brookline and Dedham streets, Oak Hill.
91. Clark and Parker streets, Oak Hill.

DEPARTMENT SIGNALS.

Repetition of first	—Second alarm.
3 blows	—General alarm.
10 blows followed by station number	—Second and General combined.
2 " " " " "	—All out.
2-2 " " " " "	—No. 1 Engine out of city.
3 " " " " "	—No. 2 " " " "
3-3 " " " " "	—No. 3 " " " "

SPECIAL CALLS.

1-2-1, followed by station number	—No. 1 Engine.
1-2-2 " " " "	—No. 2 Engine.
1-2-3 " " " "	—No. 3 Engine.
1-3-3 " " " "	—Chemical A.
1-2 " " " "	—No. 1 Truck.
4 " " " "	—No. 4 Hose.
5 " " " "	—No. 5 Hose.
6 " " " "	—No. 6 Hose.
7 " " " "	—No. 7 Hose.

PRIVATE SIGNALS.

- 1 blow at 11.45 A. M. and 5.45 P. M. (Sundays 12.15 P. M.)—Test signal.
- 14 blows, followed by station number—Police signal.
- 3-3-3 at 8.15 A. M. and 12.45 P. M.—No school signal.

INSTRUCTIONS.

Cautions to Persons Holding Signal-Station Keys.

Never open or touch the apparatus except in case of fire.

Never sound the alarm for a fire seen at a distance unless assistance is called for.

Be reasonably sure there is a fire before sounding the alarm.

Be sure your station is locked before leaving it.

Never let the key go out of your possession, except to some responsible person, to give an alarm of fire, and be sure the key is returned.

If you remove from your house or place of business return the key to the Chief of Fire Department, City Hall.

Directions in Case of Fire.

Get the key to the nearest station to the fire; open and pull the hook all the way down once, and let go. If you hear no sound from the bells or tapper in the station, pull again. If you fail the second time, go to the next nearest station and do the same, but do not touch any other if the nearest one gives the alarm.

Remain at the station, if possible, after giving an alarm, to direct the firemen to the fire.

No person will give alarms for the same fire (after the first alarm has been given) without an order from the Chief or Assistant Chief.

Citizens are earnestly requested to keep themselves informed as to the location of keys. Signs over each station will give the desired information.

STATEMENT OF DETAILS OF FIRES AND ALARMS FOR THE YEAR ENDING DECEMBER 31, 1886.

February 2—Station 15—2.43 p. m. Washington and Centre streets. Three-story frame, 30x60, stores and tenements. Owned by J. N. Bacon. Loss \$115. Insured. Cause, overheated smokepipe. Apparatus present: Engine 1, Truck 1, Hose 4, Chief and Assistant Chief.

February 7—Station 312—9.27 a. m. Cherry street. Two and a half-story frame, 25x50 dwelling. Owned and occupied by Geo. E. Allen. Damage slight. Cause, rubbish on hot smokepipe. Apparatus present: Engine 2, Hose 4, 5, Truck 1. Chief and Assistant Chief.

February 12 to 20. Engine 1, 2 and 3 detailed extra work, caused by freshets.

March 1—9.30 a. m. Eldredge and Vernon streets. Three-story frame dwelling, 30x40. Occupied by Rev. G. W. Shinn. No damage. Cause, burning chimney. Attended by Engineer Judkins and Pingree, of Engine 1.

March 3—8 p. m. Washington street. Burning grass. Cause, locomotive sparks. Extinguished by members. Engine 2.

March 4—Station 75—5.23 p. m. Cypress street. One-story frame, 12x50. Hennerly. Owned and occupied by A. H. Rolfe. Damage \$75. Insured. Cause, explosion of incubator. Apparatus present: Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

March 5—7.45 p. m. Washington street. Burning grass. Cause, locomotive sparks. Extinguished by citizens and members Engine 2.

March 18—Station 64—10.58 p. m. Fire in Cambridge. Alarm unnecessary; given by police. Apparatus present: Engine 3, Hose 7, Truck 1, Assistant Chief.

March 26—3. p. m. Central street. Burning grass and fences. Cause, locomotive sparks. Extinguished by Hose 5, Capt. Washburn in charge.

March 27—Station 23—3.20 a. m. Washington street. Two-story frame, 20x30. Stores. Owned by J. W. Bailey. Occupied by R. Rose, S. Hatchard. Loss \$760. Insured. Cause, incendiary. Apparatus present: Engines 1, 2, Hose 4, Truck 1, Chief and Assistant Chief.

April 10—Station 26—10.30 a. m. Washington Park. Grass and fences. Cause, careless burning of rubbish. Apparatus present: Engines 1, 2, Hose 4, Truck 1, Chief and Assistant Chief.

April 11—Station 41—3 10 p. m. Evergreen street. Grass and fences. Cause, careless burning of rubbish. Apparatus present: Engine 2, Hose 4, 5, 6, Truck 1, Chief and Assistant Chief.

April 11—10 a. m. Centre and Norwood streets. Woodland. Cause, unknown. Extinguished by Capt. English, of Engine 3.

April 11—11 p. m. Beacon and Crystal streets. Woodland. Cause, unknown. Extinguished by Assistant Chief and members Engine 3.

April 13—Station 32—10.04 p. m. Washington street. One-story frame, 16x18, stables. Owned and occupied by Jos Zellar. Loss \$25. No insurance. Cause, smoking in

building. Apparatus present. Engine 2, Hose 4, 5, 5, Truck 1, Chief and Assistant Chief.

April 17—3.30 p. m. Elliot and Boylston streets. Grass, &c. Cause, locomotive sparks. Extinguished by citizens and Assistant Chief.

April 18—Telephone—1 p. m. Fuller street. Grassland. Cause, incendiary. Extinguished by members No. 2 Engine, Chief Department.

April 18—Telephone—7.30 p. m. Valentine street. Grassland. Cause, incendiary. Extinguished by members No. 2 Engine, Chief Department.

April 18—7.35 p. m. Grassland. Cause, incendiary. Extinguished by members No. 1 Truck, Chief Department.

April 21—Station 64—3.21 p. m. Walnut street and Floral avenue. Grass and fences. Cause, sparks from bonfire. Apparatus present: Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

April 21—Station 26—3.25 p. m. Murray street. Three-story frame, 30x60. Factory and tenements. Owned by Wm. Claflin. Damage slight. Cause, sparks from chimney. Apparatus present: Engines 1, 2, Hose 4, Truck 1, Chief Department.

April 26—Station 26. Walnut and Mill streets. Woodland. Cause, incendiary. Apparatus present: Engines 1, 2, Hose 4, Truck 1, Chief and Assistant Chief.

April 27—Grassland—4.15 p. m. Washington street. Cause, malicious mischief. Extinguished by Hose 6, Capt. Early incharge.

April 30—Station 74—1.09 p. m.—Second, 1.14 p. m. Lake avenue. Four story frame dwelling, 30x40. Owned

and occupied by Frank Edmands. Loss \$3,500. Insured. Cause, sparks from portable forge. Apparatus present: Engines 2, 3, Hose 4, 6, 7, Truck 1, Assistant Chief in charge.

May 2—Telephone—2 45 p. m. Chestnut and Beacon streets. Woodland. Damage slight. Cause, set by children. Apparatus present: Hose 6, 7. Chief Department.

May 3—10 p. m. Needham street. Woodland. Damage slight. Extinguished by citizens and Hose 7.

May 4—10 a. m. Needham street. Woodland and fences. Loss \$100 Cause, incendiary. Apparatus present: Hose 7 and detail from Engine 3, Assistant Chief in charge.

May 17—12.15 p. m. Hillside avenue. Three-story frame dwelling, 30x60. Owned and occupied by F. F. Raymond, 2d. Cause, burning chimney. No damage. Apparatus present: Hose 2, Chief Department.

May 22—Special call "22"—12.54 p. m.—Brighton District. Cause, call for assistance. Apparatus detailed: Engine 1.

May 25—Station 5—6.40 a. m. Wales street. Two and a half-story frame dwelling, 24x48. Owned by Mrs. E. R. Eaton. Occupied by W. F. Rand and Mrs. Morrill. Loss \$280. Insured. Cause, unknown Apparatus present: Engine 2, Hose 5, 6, Truck 1, Chief and Assistant Chief.

May 26—10.30 a. m. Temple street. Two and a half-story frame dwelling, 22x36. Owned and occupied by — Foster. Present: Engineer Cummings, Engine 2.

May 31—Station 35—11.23 p. m. Lucas avenue. Two-story frame planing mill, 40x80. Owned and occupied by M. Frank Lucas. Cause, sparks from furnace. Loss \$50. No insurance. Apparatus present: Engine 2, Hose 4, 5, 6, Truck 1, Chief and Assistant Chief.

June 18—3.35 p. m. Washington street. Two-story frame store and tenement, 20x30. Owned and occupied by M. J. Hartnett. Damage slight. Cause, sparks from furnace. Apparatus present: Hose 1.

June 27—1.30 a. m. Eldredge and Vernon streets. Rubbish rear Underwood School. Cause, rekindling of bonfire. Extinguished by Hose 1.

June 27—Station 5—12.38 p. m. Beacon street. Story and a half frame stable, 12x20. Owned and occupied by John Flynn. Loss \$25. Insured. Cause, smoking in building. Apparatus present: Chemical A, Hose 2, 5, 6, Truck 1, Chief and Assistant Chief.

July 4—Station 71—6.13 p. m. Cemetery avenue. One and a half-story frame dwelling, 14x28. Owned by Matthew Connors. Occupied by John Cody. Cause, fire-crackers. Damage slight. Apparatus present: Chemical A, Engine 3, Hose 4, 7, Truck 1, Chief and Assistant Chief.

July 5—Station 26—2 33 a. m. Walnut and Mill streets. Two-story frame grain mill, 28x30. Owned by Mr. Wm. Claffin. Unoccupied. Loss \$500. Insured. Cause, incendiary. Apparatus present: Chemical A, Engine 1, Hose 2, 4, Truck 1, Chief and Assistant Chief.

July 6—Station 24—12.14 p. m. Adams street. Peat meadow. Cause, incendiary. Apparatus present: Chemical A, Engine 1, Hose, 2, 4, Truck 1, Chief and Assistant Chief.

July 12—Station 25—5.57 p. m. Crafts street. Peat meadow. Alarm unnecessary. Apparatus present: Chemical A, Engine 1, Hose 2, 4, Truck 1, Chief and Assistant Chief.

July 31—Station 62—2.48 p. m.; second, 2.51 p. m. Chestnut street. Two-story frame stable, 30x40. One-story

frame hennery, 15x30. Three-story frame dwelling, 30x60. Owned and occupied by Willard Marcy. Loss \$3,500. Insured. Cause, children playing with matches. Apparatus present: Chemical A, Engine 3, Hose 2, 4, 6 and 7, Truck 1, Chief and Assistant Chief.—Two and a half-story frame dwelling, 22x40. Owned and occupied by John Brundrett. Slightly damaged. Cause, sparks from above fire. Extinguished by Chemical A

August 1—Station 62—11.03 p. m. False. Apparatus present: Chemical A, Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

August 5—Station 23—7.09 p. m. Walnut and Bowers streets. Two-story brick church, 40x80. Owned and occupied by Methodist Episcopal Society. Damages light. Cause, ignition of woodwork from swing gas jet. Apparatus present: Chemical A, Engine 1, Hose 2 and 4, Truck 1, Chief and Assistant Chief.

August 19—Station 61—1.54 a. m. Chestnut street. One-story frame outbuilding. Owned by Newton Mills Company. Cause, supposed smoking in building. Damage slight. Apparatus present: Chemical A, Engine 3, Hose 7, Truck 1, Assistant Chief.

August 29—Station 73—1.11 a. m.—Second—Station 75—1.15 a. m. Centre and Beacon streets. Two-story frame stable, 30x60. Owned by D. S. Farnham. Occupied by Wm. Weir. Loss \$4,800. Insured. Cause, incendiary. Two and a half frame dwelling, 30x60. Owned by D. S. Farnham. Occupied by Mrs. Morrison and others. Loss \$75. Insured. Cause, ignition from above fire. Two-story frame stable, 20x30. Owned and occupied by J. H. Bodge. Loss \$20. Insured. Cause, ignition from above fire. Two-story frame stable, 18x20. Owned and occupied by D. N. B.

Coffin. Loss \$40. Insured. Cause, heat from original fire. Two and a half-story frame double dwelling, 30x40. Owned by D. S. Farnham. Loss \$50. Insured. Cause, heat from original fire. Apparatus present: Chemical A, Engines 1 and 3, Hose 4, 6, 7, Truck 1, Chief and Assistant Chief.

September 20—Station 23—4.40 p. m. Washington and Walnut streets. Cause, exhibit of detail of department before the Mayor and City Government of Brockton, Mass. By order of his Honor the Mayor. Apparatus present: Chemical A, Engine 1, Hose 2, 4, Truck 1, Chief and Assistant Chief.

September 21—Station 15—8.03 a. m. Washington and Channing streets. Four-story frame tenements, 30x100. Owned by F. E. Hamlin. Occupied by Mrs. Nutting. Loss \$108.93. Insured. Cause, upsetting lamp. Apparatus present: Chemical A, Engine 1, Hose 4, Truck 1, Chief and Assistant Chief.

September 22—11.25 a. m. Park and Franklin streets. Three-story frame dwelling, 30x40. Owned and occupied by A. S. March. Cause, chimney fire. No damage. Apparatus present: Hose 1, Chief Department.

October 1—Station 71—4.30 p. m. Cemetery avenue. Story and a half frame dwelling, 14x28. Owned by Mathew Connors. Occupied by John Cody. Loss \$200. Insured. Cause, defective flue. Apparatus present: Chemical A, Engine 3, Hose 4, 7, Truck 1, Chief and Assistant Chief.

October 4—3.30 p. m. Concord street. Outbuildings. Loss \$15. Cause, children playing with matches. Present: Assistant Chief, Capt. Early, of Hose 6.

October 17—Telephone—6.55 p. m. Elgin street. Woodland. 20 acres. No loss reported. Extinguished by Hose 3, Assistant Chief.

October 17—6.35 p. m. Grove street. Woodland. 5 acres. No loss reported. Apparatus in attendance: Hose 6.

October 18—9.20 p. m. Park street. Grass and fence. Cause, set by children. Apparatus present: Hose 1.

October 22—3.40 p. m. Grove street. Grassland. Cause, sparks from steam shovel. Apparatus present: Hose 6.

October 22—Station 74—6.10 p. m. Lake avenue. Woodland. Cause unknown. Apparatus present: Chemical A, Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

October 22—Station 6—11.16 p. m. High street. Three-story frame stores, &c., 18x30. Owned by J. E. Trowbridge. Loss \$954. Insured. Cause, unknown. Apparatus present: Chemical A, Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

October 24—Telephone—3.15 p. m. Fuller and Washington streets. Woodland. Cause, incendiary. Apparatus present: Hose 2, Chief.

October 25—7.50 a. m. Walnut and Beacon streets. Peat meadow. Cause, unknown. Apparatus present: Hose 3, Assistant Chief.

November 2—Station 61—10.03 p. m. Chestnut street. Two-story frame stable, 20x30. Owned by Willard Marcy. Occupied by Sheridan Bros. and others. Loss \$175. Insured. Cause, incendiary. Apparatus present: Chemical A, Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

November 21—Station 15—2.02 a. m. Boyd street. Two-story frame stable, 18x28. Owned by Mrs. Annie Mahr.

Occupied by William Beals. Also two-story frame dwelling, 28x30. Owned and occupied as above. Loss \$1,035. Insured. Cause, incendiary. Apparatus present: Chemical A, Engine 1, Hose 4, Truck 1, Chief and Assistant Chief.

November 26—Station 27—10.55 a. m. Highland avenue. False. Caused by Telephone Employees. Apparatus present: Chemical A, Engine 1, Hose 2, 4, Truck 1, Chief and Assistant Chief.

November 27—Station 73—8.20 p. m. Norwood avenue. Two-story frame stable, 18x20. Owned and occupied by F. P. Dunbar. Loss \$132. Insured. Cause, breaking of lantern. Apparatus present: Chemical A, Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

December 5—Station 4—8.45 p. m. Ash street. Two and a half story frame dwelling, 30x40. Owned and occupied by H. G. Hildreth. Loss \$82.96. Insured. Cause, defective open fire place. Apparatus present: Chemical A, Engine 1, Hose 2, 4, 5, 6, Truck 1, Chief and Assistant Chief.

December 7—Station 112—8.40 p. m. Hunnewell avenue. Three-story frame dwelling, 40x40. Owned and occupied by Dr. Bartlett. Loss \$3,867. Insured. Cause, overheated furnace pipes. Apparatus present: Chemical A, Engine 1, Truck 1, Chief and Assistant Chief.

December 9—Station 23—10.53 p. m. Harvard street. Alarm unnecessarily given for smoking chimney. Apparatus present: Chemical A, Engine 1, Hose 4, Truck 1, Chief and Assistant Chief.

December 24—Station 8—2.37 a. m. Hammond street. Three-story frame dwelling, 30x40. Owned and occupied by Hon. John Lowell. Loss \$350. Insured. Cause, sparks

from open fire place. Apparatus present: Chemical A, Engine 3, Hose 7, Truck 1, Chief and Assistant Chief.

December 24—Station 23—7.15 p. m. Beach street. Two-story frame stable, 18x20. Owned and occupied by Frank Hunting. Loss \$375. Insured. Cause, incendiary. Apparatus present: Chemical A, Engine 1, Hose 2, 4, Truck 1, Chief and Assistant Chief.

December 24—Station 23—9.18 p. m. Court street. Two-story frame stable, 18x24. Owned and occupied by E. Smead. Loss \$290. Insured. Cause, incendiary. Apparatus present: Chemical A, Engine 1, Hose 2, 4, Truck 1, Chief.

December 24—Station 23—9.45 p. m. Court street. Two-story frame stable, 20x30. Owned by William Claflin. Occupied by E. Bradshaw. Loss \$275. Cause, incendiary. Apparatus present; Chemical A, Engine 1, Hose 2, 4, Truck 1, Chief and Assistant Chief.

RULES AND REGULATIONS

FOR THE GOVERNMENT OF THE

NEWTON FIRE DEPARTMENT.

CHIEF OF DEPARTMENT.

The Chief of Department shall have the sole and absolute command at fires and alarms of fires over all members of the department and of all other persons present at fires, and of all apparatus and appurtenances belonging to the department, and direct all measures he may deem proper for the extinguishment of fires. He shall devote his whole time to the performance of the duties of his office. He shall visit the engine, hose, and truck stations daily, if possible (Sundays excepted), and report to the Fire Committee or Board of Aldermen such suggestions or recommendations as he may deem necessary. He may, from time to time, issue such orders for the government of the members as he may deem necessary, subject to the approval of the Mayor and Aldermen.

He shall have power to suspend any officer or member of the department for insubordination, disorderly conduct, or neglect of duty, said suspension to continue, pending the action of the Mayor and Aldermen.

ASSISTANT CHIEF.

In the absence of the Chief of Department the Assistant Chief shall have the same authority, and exercise the same powers, as the Chief of Department. On arrival at fires he shall report to the officer in command, and when on duty wear his fire-hat.

He shall have, under the direction of the Chief of Department, general supervision and management of all the telegraph apparatus belonging to the department, and every thing pertaining to the same. He shall keep the same at all times in perfect working order, and repair all breaks in the most expeditious manner, reporting to the Chief of Department for all necessary supplies, and such improvements as he may think advisable. When additional help is necessary, he will make application to the Chief of Department, and, when in the immediate vicinity of the department houses, he may obtain the assistance of the regular members, by direction of the Chief of Department. He shall give necessary instructions to persons in the department and to key-holders. He shall devote his whole time to the duties of the position.

ENGINEERS.

The engineers shall have full control of the engine, bunk, and meeting-rooms and basements, and shall report to the Chief of Department at once the name of any member of the department, or other person, guilty of any disorderly conduct, or violation of the Rules and Regulations; also any damage which their apparatus, or any part of it, their houses, or furniture, may have sustained. They shall keep an account of all supplies that come to the station, and promptly

report when materials are required for use; keep their engines at all times in condition for immediate service. Delays or accidents resulting from neglect will be sufficient cause for suspension or discharge. They shall instruct their stokers in the management of the engines. The use of all patent preparations for cleaning the metal is strictly prohibited. All material for polishing will be furnished from headquarters. Keep the safety valve set at eighty pounds, and run the engines according to the line of hose; a hundred pounds will be carried only when working through an extra long line, or two lines of, say five hundred feet each. Water-pressure will never exceed a hundred pounds, except on special order from the Chief or Assistant Chief of Department.

The following whistle-signals will be made use of in this department until further orders:

One whistle, signals pipemen to look out for water.

Two whistles, signal for burst hose.

Three whistles, signal for coal.

Two short and one long whistle, signal, "Make up."

Engineers will be on duty at all times. No member shall shut off the water, or in any manner move the machinery attached to the engine, except at request of the engineer.

When the services of the engine are not required, draw the fire, always leaving sufficient quantity for rekindling in case of another alarm while returning. All fuel partially consumed shall be preserved, and not be left burning in the streets.

DRIVERS.

Drivers permanently employed shall be on duty at all times. They shall be held personally responsible for their stables and for the care and management of their horses. They must not drive them faster than is consistent with the safety of the public and of the apparatus of the department. They will be held responsible for any damage caused by them, or carelessness displayed in conveying their apparatus to or from fires. Racing to or from fires will not be allowed under any circumstances. If the apparatus of two or more companies shall proceed to or from a fire on the same street they shall do so in single file. Returning from fires, they shall drive at a moderate rate of speed. On arriving at fires, the horses shall be blanketed, and kept moving, if possible, and upon returning to the house, if wet by perspiration, they must be immediately rubbed dry. These instructions will also apply to drivers of hose-carriages and tenders.

EXERCISE HOURS.

The horses used exclusively by this department will be exercised daily, in accordance with the following order:—

IN BOARD OF ALDERMEN,
April 21, 1884.

Ordered :

That on and after May 1, 1884, the several horses permanently employed in the Fire Department shall be exercised daily (Sundays excepted), and in the following streets, except when otherwise ordered by the Chief of Department:—

No. 1 Engine—Washington to Church, to Eldredge, to Vernon, to Park streets.

No. 2 Engine—Washington to Elm, to Webster, to Waltham, to Chestnut, to Margin streets.

No. 3 Engine--Willow to Beacon, to Crescent avenue, to Pleasant, to Centre, to Willow streets.

No. 1 Truck }
No. 4 Hose } Washington, Parsons to Central avenue.

Exercise hours to be regulated by Chief of Department, and not to exceed one hour nor less than one-half hour. The rules governing inclement weather and holidays will remain in force. Any employee failing to conform the above order shall be subject to suspension.

H. L. BIXBY,
Chief of Department.

I. F. KINGSBURY,
Clerk.

When the horses have performed no duty within the twenty-four hours next preceding. The horses will not be exercised on public holidays, and never speed them faster than a slow trot.

“ RIGHT OF WAY WHEN PROCEEDING TO FIRES,” AS
ACCORDED BY LAW.

[Chap. 37, Acts 1874.]

An Act to Punish the Wilful Obstruction of Fire Engines, etc.

Whoever wilfully and maliciously obstructs, or retards, the passage of any engine, or other apparatus of any Fire Department, while going to a fire, through any street, lane, alley, or other way, shall be punished by imprisonment in the House of Correction not exceeding three months, or by a fine not exceeding fifty dollars. [*Approved February 28, 1874.*]

All drivers of this department will govern themselves by the above law, and use the utmost discretion at all times to avoid accidents. Hose carriages, in response to alarms of fire, will follow the engines to which they belong. Call-drivers of hose carriages will be required to sleep in their respective stations.

STOKERS.

The stokers shall respond promptly to all alarms, and, when in quarters, they will assist in hitching up. When on duty at fires, they shall be under the direction of their respective engineers, who shall require their whole and undivided attention. On return from fires, they shall remain on duty until relieved by their engineers. They will be required to sleep in their respective stations.

FOREMEN.

It shall be the duty of the foremen of all companies where permanent men are not employed to see that the apparatus committed to their care, and the several stations in which the same are deposited, and all things in or belonging to the same, are kept neat and clean, and in order for immediate use; to see that the snow is cleared from the sidewalks and driveways connected with the stations under their charge.

FINES.

Foremen of companies will see that the following fines for non-attendance are rigidly enforced:

For absence from fires and alarms.....	\$1 00
For absence from regular and special meetings	50

ASSISTANT FOREMEN.

The assistant foreman shall, in the absence of the foreman, perform all the duties and exercise the same authority as the foreman.

MEMBERS.

The members of the several companies shall, upon an alarm of fire from the section of the city to which they are assigned for duty, proceed promptly to the place of the fire in an orderly manner, report to the foreman, and perform any duty that may be required of them. They shall remain on duty until relieved by orders, which shall be given only by the officer in command. If the company to which they are attached does not respond to the alarm on first call, they shall proceed to their engine, hose or truck stations, and remain thirty minutes, unless called into service, or relieved by dismissal. No member shall be absent from duty for a longer period than one month, except in case of sickness, or by special permission of the Chief of Department. No person whose occupation requires his daily absence from the city will be eligible to membership in this department. Any officer or member of this department who shall remove from the city shall thereupon cease to be a member; and all members of the department will be required to live within a reasonable distance of their respective stations.

SUBSTITUTES.

Each company may have two substitutes to take the places of call-members absent from the city, or disabled by sickness. They shall be approved by the Chief of Department, and shall, if for services rendered for a period of fifteen days or more, receive the same compensation as their principals, to be deducted from their principal's pay. Any substitute serving for a less time than fifteen days shall be

paid the amount of fines imposed on his principal for non-attendance at fires or alarms. Any member failing to pay his substitute on the following pay-day shall be subject to dismissal. No substitute can be assigned to duty in place of his principal during the time of a fire or an alarm of fire.

BUNKERS.

Call-men to whom beds are assigned will be required to retire at or before 11 P. M., unless excused by the engineer, or person in charge of the station, and will not be allowed to use or occupy the same during the day, unless deprived of their usual rest by the performance of active fire duty, or in case of sickness sufficient to require the use of the same. No visitors will be allowed in the bunk-rooms after hours, or at any other time while the beds are occupied. It shall be the duty of the engineer to immediately report to the Chief of Department any misconduct or violations of the rules on the part of persons occupying said beds. The occupant of each bed will be held responsible for the cleanliness of the same, and for any damage to either bed or bedding through carelessness. All members occupying sleeping-quarters in the engine, hose, and truck stations, shall vacate their beds, from May 1 to Oct. 1, at 6.30 A. M., and from Oct. 1 to May 1, at 7 A. M.

HORSES AND FEEDING.

The system of feeding shall be as follows, particular care being exercised not to feed or water the horses while too warm :—

Four quarts of oats morning and night ; this, with about eight or ten pounds of hay after bedding the horses, will constitute the daily allowance for each horse, and must not be exceeded. But, when it shall be ascertained that a less allowance is sufficient, the driver will exercise discretion as to the quantity. The stalls to be cleaned early in the morning, after breakfast the horses groomed and the harnesses cleaned. Horses sick or disabled will be immediately reported to the Chief of Department. No alteration or changes in harness will be permitted, except upon authority of the Chief of Department. When horses are in the shop for shoeing, the drivers shall remain with them, and shall report to the Chief of Department any unnecessary delay, or any work improperly executed, and will allow but one shoe to be removed at a time.

BADGES.

All members of the Department shall be provided with a badge, to be known as the Regulation Badge of the Department, which shall be worn in a conspicuous place during the time they are on duty; and no member shall lend his badge on any pretext whatever. Any member losing his badge shall immediately notify the Chief of Department and use all diligence to recover the same. He shall be required to pay for the same before another badge will be provided, the money so paid to be refunded should the badge be found. These badges shall at all times remain the property of the city. Any member loaning his badge to any person not connected with the Department shall be subject to dismissal. No person will be recognized as a member of this Department unless wearing his badge.

ROLL-CALL.

Upon returning from a fire, or an alarm of fire, the Assistant Foreman, or, in his absence, the Foreman, shall call the roll and report to the Chief of Department any member absent and the excuse for the same; and in no case shall the permanent members act as substitutes for the call-members, or answer for them at roll-call.

LEAVE OF ABSENCE.

No permanent member shall leave the city or be granted leave of absence without notifying the Chief of Department and procure a substitute to his acceptance; and the substitute shall be on duty before the applicant leaves his post, and the pay of the substitute may be deducted from the pay of the principal. Any member of the call-force expecting to be absent from the city shall notify the Foreman of his company and procure a substitute to his satisfaction. Whenever leave of absence is granted to bunkers they shall report the same to the person in charge of their station, and shall in like manner report their return.

SUPPLIES.

No member of the Department will be allowed to make any purchases for the Department, chargeable to the city, except by order of the Chairman of Fire Committee or Chief of Department.

MEALS.

For permanent members three hours daily will be allowed for meals, and will be so arranged that there shall be at all times one member on duty.

DUTIES AT FIRES.

At all fires, the first officer arriving shall, in the absence of the Chief or Assistant Chief, and until his arrival, act as Chief of Department, and be obeyed and respected accordingly. The men are required to move quickly, and obey orders promptly and without criticism. The officers in charge of the several companies shall, immediately on their arrival at a fire, report to the officer in command, and remain for orders. No company shall leave the fire grounds, or take the apparatus of which they have charge therefrom, without the order or permission of the officer in command. Any neglect of duty, disobedience of orders, or disrespect to officers, shall be reported to the Chief of Department. No member shall wilfully or maliciously direct a stream of water upon any fireman or citizen. All disputes which may arise between companies or individual firemen when on duty shall be settled by the engineer in command. Members of companies that are not in service at fires will not enter the buildings unless ordered, but remain convenient to the fire, equipped, and ready for orders.

GOING TO OR FROM FIRES.

Order and decorum will be preserved when going to or from a fire or an alarm. To guard against collision and accident when proceeding to fires, the gongs will be struck when approaching street-crossings, turning corners, and approaching the fire-grounds.

RIDING TO FIRES.

All drivers will be held responsible for any unnecessary overloading, and will in all cases judge of the ability of the horses, the condition of the streets, and the distance to travel. The men will mount and dismount as ordered by them. Officers will avail themselves of any opportunity to ride to fires (excepting on engines), to the exclusion, if necessary, of the men.

FIRE GROUNDS.

All engine and hose companies responding to second or general alarms will connect, but will not lay their lines until they have reported to the officer in command at the fire for orders.

STATIONS.

Stations of the department shall be open from 10 A. M. until 10 P. M. for visitors, and at any other time for inspection by members of the City Government. On the Sabbath

all stations must be closed, and it is made the duty of the engineer or person in charge to see that order and quiet are preserved. All work other than that absolutely necessary will be omitted for the day. The permanent members of each station shall once in each week scrub the floors of their respective stations, and at all times keep them neat and clean. The members in charge of the several stations shall personally attend to the receiving of visitors, whether members of the City Government, officers of the Department or citizens. Citizens visiting the stations shall be courteously treated, have reasonable questions answered and any proper information given. All members detailed to sleep in the stations must be in their quarters at the time stated for closing the station, unless otherwise excused, and all other persons must leave at that time.

DRILL.

Until further notice the truck company will drill once each month, from May 1 to October 1, and all other companies at such times as may be ordered by the Chief of Department.

CONDUCT.

All members of the Department are strictly required in their intercourse with each other, social or official, to observe a courteous demeanor, and officers or men in addressing each other will do so in a respectful manner. While on duty at fires the greatest degrees of silence compatible with a proper discharge of duty will be required. No profane or ungentlemanly language, or disorderly conduct will be allowed on

the part of any officer or member of the Department when on duty.

No spirituous or malt liquors will be allowed in any station of the Department or at any fire. If any member shall enter any station of the Department intoxicated or become intoxicated at a fire he shall be subject to dismissal.

No gambling of any kind will be allowed in any station of the Department.

GENERAL RULES.

RULE 1.

No driver of engine, hose, hook-and-ladder truck, or other vehicle, shall drive over any line of hose if it can be avoided.

RULE 2.

No company will be allowed to take its apparatus from their quarters, except in case of fire, without consent of the Chief of Department.

RULE 3.

The hose must be changed on reels once in four weeks, unless otherwise ordered by the Chief of Department, for which purpose the foreman will warn the members of his company detailed for this purpose; and any member absent, unless excused, will be fined the same amount as for absence from fires.

RULE 4.

Any member permanently employed who refuses or neglects to pay any just debt contracted during his connection with the department, it shall be deemed sufficient cause for suspension or discharge.

RULE 5.

No permanent officer or member of the department shall attend a caucus or political convention as a delegate, distribute tickets at any election, or take any part whatever in political matters other than to exercise a right of suffrage.

RULE 6.

All members of the department will be required to address officers by their respective titles when on duty.

RULE 7.

When any member shall leave the department, he shall thereupon return his badge, key and copy of Rules and Regulations, in good condition, to the foreman of his company, who shall immediately notify the Chief of Department; and any member failing so to do shall have the amount deducted from his pay.

RULE 8.

No balls, parties or social gatherings of any description shall be held in any building in charge of the department, except on permission from the Chief of Department.

RULE 9.

No property belonging to the city will be loaned for any purpose whatever except upon written order of the Chief of Department.

RULE 10.

No hoseman or truckman at call shall be entitled to pay for less than fifteen days' service. All appointments shall, as far as practicable, be made to date from the first or fifteenth day of each month.

RULE 11.

In the use of hydrants all members of the department are instructed to use great care in the opening and closing of the same, and to see that each cap is properly adjusted before leaving. The first company connecting to a hydrant in case of fire will leave one member in charge of the same; should a second company or line desire connection, it will not be made until the line is complete to the fire, and orders given for water. Exceptions to this are ordered for engines, which will be given immediate connection (if ordered into service), and the hydrant left in charge of the engineer.

RULE 12.

Officers of companies, hosemen and ladder-men will wear their fire-hats when on duty.

Approved by the Board of Mayor and Aldermen, April 19, 1880.

Attest: EDWIN O. CHILDS, *Clerk.*

H. L. BIXBY, *Chief Fire Department.*

ORDINANCES RELATING TO FIRE DEPARTMENT

ORDINANCE XIII.

FIRE DEPARTMENT.

SECTION 1. A Fire Department is hereby established. Department established Charter, § 7

There shall be a Chief of Fire Department, an Assistant Chief, who shall be operator of the fire alarm under the direction of the Superintendent telegraph, three steam fire-engine companies, four hose companies, and one truck company.

Each steam fire-engine company shall consist of eleven men; to wit, a foreman, an assistant foreman (who shall also be clerk), an engineman, a driver, a fireman, and six hosemen. Number men and officers

Each hose company shall consist of six men; to wit, a foreman, an assistant foreman (who shall also be clerk), and four hosemen.

Each truck company shall consist of thirteen men; to wit, a foreman, an assistant foreman (who shall also be clerk), a driver, and ten truckmen.

SEC. 2. The Chief of Department shall be responsible for the discipline, good order, and proper conduct of the officers and men consti- Chief Duties

tuting the department, and for the good condition of all houses, reservoirs, hydrants, wells, engines, hose, hose-carriages, hooks and ladders, trucks, and all apparatus and furniture thereto belonging, and connected with the department. He may suspend any officer or member, and shall forthwith refer his case to the Board of Aldermen for its action. He shall have the superintendence, and, under the direction of the joint standing committee on the fire department, the control, of the engine and other houses used by the department, of the furniture therein, and of the engines and apparatus, as well as of all other property appertaining to the department.

May suspend.

Superintendence and control of houses and apparatus.

SEC. 3. The Chief of Department, or, in his absence, the Assistant Chief, shall have sole and absolute control and command of all the other members of the department and of other persons present at fires.¹ The officer in command of the

Sole command of members.

Fire-wards, etc., may order buildings to be pulled down.

¹PUBLIC STATUTES.—SEC. 3. The fire-wards, or any three of them, present at a place in immediate danger from a fire, or, where no fire-wards are appointed, the selectmen, or mayor and aldermen present, or, in their absence, two or more of the civil officers present, or, in their absence, two or more of the chief military officers of the place present, may direct any house or building to be pulled down or demolished, when they judge the same to be necessary in order to prevent the spreading of the fire.

Engineer to have power of fire-wards under Sec. 3.

SEC. 4. In cities and towns, which by vote of the City Council, or of the legal voters respectively, have accepted the provisions of this section, or of chapter two hundred and one of the statutes of the year eighteen hundred and seventy-three, the engineer of a fire department in command at a fire shall, to the exclusion of all other persons, have the power conferred by the preceding section.

Acceptance.

[Stat. 1873, chap. 201. Accepted Feb. 12, 1877.]

company which first arrives at a fire shall be the officer in command until the Chief of Department or the Assistant Chief arrives.

SEC. 4. The Chief of Department shall keep Rolls. rolls of the companies, specifying the name, age, occupation, and residence, and the date of the admission and discharge, of each member of the department; and he shall keep an accurate account of all property belonging to it.

He shall, at the close of each three months, Reports of fires, etc. and oftener if required, make to the City Council a detailed report of the condition of the fire department, of losses and accidents by fire, with the causes thereof as well as they can be ascertained, and of the description of the buildings and other property destroyed or injured, the amount of insurance, and the names of the owners.

SEC. 5. The foremen shall preserve order Foremen. and discipline in their respective companies, and shall promptly report in writing the name of any member guilty of misconduct to the Chief of Department, who shall, if he thinks it proper, report thereon to the Mayor and Aldermen.

The foremen shall cause to be kept by the Rolls. respective clerks rolls of the companies, specifying the time of admission and discharge of each member, together with the age, residence, and occupation of each member, and a record of all the city's property intrusted to their care. Their rolls and record-books shall at all times be subject to the inspection of the Chief of Department;

and they shall furnish him with copies or abstracts thereof at his request.

Care of apparatus, etc.

SEC. 6. It shall be the duty of the men permanently employed in the department to keep the apparatus committed to their care, and the several buildings in which the same is deposited, and all things intrusted to their care, clean, and in order for immediate use, and to wash and dry the hose of the entire department when required so to do; and they shall clear the snow from the sidewalks and driveways connected with the houses under their charge.

Companies not to leave city, except.

SEC. 7. No company shall leave the city in case of a fire in another city or town, except by order of the Chief or Assistant Chief of Department.

Members not to be transferred, except.

SEC. 8. No member shall be transferred from one company to another, except by order of the Chief of Department.

Badge.

SEC. 9. Every member of the department shall wear at every fire such a badge as the Chief of Department shall prescribe; and no person without such badge shall, except by permission of the officer in command, enter within lines formed at a fire by such officer.

Shavings and other combustible material.
Pub. Stats., chap. 104, §§ 1-12.

SEC. 10. The Chief of Department shall examine all places where shavings or other combustible materials are deposited or collected; and shall see to the removal of the same, whenever, in his opinion, the same are dangerous; and shall direct the owners, tenants, or occupants of such places to remove the same, which they shall do forthwith; and, in case of refusal or neglect, he

shall cause the same to be removed at the expense of such owners, tenants or occupants.

SEC. 11. The Chief of Department shall observe all buildings in which steam engines are used, and all buildings in process of erection or alteration, and make a record of such of them as in his judgment may be dangerous, and report thereon to the Mayor and Aldermen forthwith. Whenever, in the opinion of the Chief of Department, any camphene or other explosive or inflammable fluid or material should be removed, he shall forthwith notify and direct the owner, tenant, or occupant of the premises upon which the same are situated, to remove the same, which he shall forthwith do. In case such tenant, owner or occupant shall refuse or neglect so to do, the Chief of Department shall cause the same to be removed at the expense of such owner, tenant or occupant. No person shall obstruct the Chief of Department in carrying out the provisions of this section.

Inspection of
buildings by
Chief.

Steam engines,

Camphene, etc.

SEC. 12. The Chief of Department shall, on the last day of each month, prepare a pay-roll of all persons regularly employed in the department, and present it to the committee on the fire department for their action. On the last day of June and of December in each year, the clerk of each company shall make a roll, bearing the full name, age, occupation and residence of every member of the company, specifying also the number of times the company has been called out and the attendance of each member, to which shall be appended the following certificate :—

Chief to pre-
pare pay-roll,

"We, the undersigned, do hereby certify that, according to the best of our knowledge and belief, the foregoing persons are members of — company, and that said company had consisted of — members during the last six months; that during that time they have performed all the duties incumbent upon them as firemen, have been present at every turn-out of the company, or been duly excused, and that they are entitled to all the privileges and pay of firemen."

Certificate of
pay-roll,

The certificate shall be signed by the foreman and clerk, and shall be delivered to the Chief of Department.

The Chief of Department shall examine these rolls, and, if they are found correct, shall approve them and present them, with the pay-rolls of the several companies, to the committee on fire department for their action.

Fire-alarm
telegraph,

SEC. 13. The Chief of Department shall have the care and management of the rooms, apparatus and machinery connected with the fire-alarm telegraph, and shall determine to whom shall be intrusted the keys of the signal boxes. He shall prepare rules and directions for giving alarms of fire through the telegraph.

Keys.

Signal boxes.

SEC. 14. No unauthorized person shall open any of the signal boxes, except in case of fire, or interfere with the wires or the poles, or other supports of the wires.

False alarms.

SEC. 15. The Chief of Department shall see that every person raising a false alarm of fire is prosecuted.

Gambling.

SEC. 16. No gambling shall be allowed in any building occupied by the fire department, nor shall spirituous liquors be kept or used there.

SEC. 17. No person shall draw water from the reservoirs or fire-hydrants, except in case of fire, and except as otherwise provided; nor shall any engine, hose, or truck, be taken out of the city, without permission of the Chief or Assistant Chief. No part of the apparatus shall be taken from the city, unless to a fire, without special permission from the Mayor and Aldermen.

Water from
hydrants, etc.

SEC. 18. No occupant of any building or room in which there is a hatchway or trap-door shall suffer the same to be left open at night.

SEC. 19. Any member of the department injured or disabled while on actual duty shall receive pay for the time lost in consequence, not exceeding three months.

Disabled mem-
bers.

SEC. 20. No person shall wantonly or carelessly set fire to any tree, bush, grass, leaves, brushwood, rubbish, or other substance in any place in the city of Newton.

Setting fires
wantonly to
trees, etc.

SEC. 21. Whoever shall violate any provision of this ordinance shall forfeit a sum not exceeding twenty dollars.

Penalty.

¹ Ordinance XV., § 19.

ORDINANCE XXIV.

BUILDINGS.

SECTION 1. No person shall erect, alter or rebuild, or essentially change, any building or any part thereof, for any purpose other than a dwelling house, without first obtaining in writing a permit from the Board of Aldermen. The application for such permit shall specify the location and size of said building, the material of

Permit.

which it is to be constructed, and the use for which it is intended.

SEC. 2. No person shall use any building, or part thereof, for any purpose rendering said building, or buildings adjacent thereto, hazardous, unsafe, or liable to be destroyed by fire, or dangerous to persons or property, without first obtaining a permit as named in section one.

Chimneys and
brick flues.

SEC. 3. All chimneys hereafter erected shall be built of brick, stone or other fire-proof, non-conducting material. All brick flues shall be smoothly plastered inside with mortar from top to bottom, and outside below the roofing. In no case shall chimneys rest upon any flooring without a footing of masonry or iron, supported by iron beams, having a secure bearing on iron at either end.

Hearths and
grates.

Hearths of fireplaces or grates shall be laid upon brick or other trimmer arches, or upon bars of iron supporting a bed of brick-work.

Wood-work.

No wood-work of any kind shall be placed at a less distance than one inch from the outside brick-work of any flue, and in no case shall a nail be driven into the masonry of any flue.

No wood-work shall be placed at a less distance than one inch from any tin or other metal flue or flues, pipe or pipes, used or intended to be used to convey heated air or steam in any building, unless such flues or pipes be cased with metal, leaving a free circulation of air all around the same.

Smoke-pipe.

No smoke-pipe shall pass through any stud or wooden partitions, whether plastered or not, with-

out being guarded either by a double collar of metal, with at least four inches' air-space and holes for ventilation, or by a soapstone ring not less than three inches in thickness and extending through the partition.

SEC. 4. Whoever violates any provision of the preceding sections of this ordinance shall be liable to a fine not exceeding one hundred dollars.

ORDINANCE XXII.

GUNPOWDER AND OTHER EXPLOSIVE COM- POUNDS.

SECTION 1. No person shall keep or deposit any gunpowder within the city unless it is well secured in tight casks or canisters.

Pub. Stats.,
chap. 103, § 56.

No person shall keep or deposit more than fifty pounds of gunpowder in any shop, store or other building which is within the distance of twenty-five rods from any other building or wharf; no person shall keep or deposit more than twenty-five pounds of gunpowder in any shop, store or other building which is within the distance of ten rods from any other building; and no person shall keep or deposit more than one pound of gunpowder in any shop, store or other building which is within ten rods of any other building unless it is well secured in copper, tin or brass canisters, holding not exceeding five pounds each, and closely covered with copper, brass or tin covers.

No person to
keep or deposit
gunpowder,
unless, etc.

Limit of
amount.

Licenses.

SEC. 2. Licenses may be granted by the Mayor and Aldermen for the retailing of gunpowder, in form substantially as follows, to-wit:—

Gunpowder License No.

LICENSE TO SELL GUNPOWDER IN THE CITY OF NEWTON.

This certifies that _____ of Newton, is (or are) hereby licensed and authorized to sell gunpowder at retail, at _____ on _____ street, being _____ place of business in said city, for one year from the date hereof, at noon, provided _____ shall duly conform to the laws and to the provisions of the ordinance printed hereon. And in case the said _____ shall at any time during the term aforesaid infringe the laws, or any of the provisions of the said ordinance, then this license shall be void.

Dated at Newton this _____ day of _____ in the year of our Lord, one thousand eight hundred and _____

Sales without
license pro-
hibited.

License may be
rescinded.

Sign.

No person shall sell any gunpowder within the city without such license. Every such license shall be in force one year from the date thereof, provided that any such license may be rescinded by the Mayor and Aldermen, at their discretion.

SEC. 3. Every person so licensed shall keep a sign over the outside of the principal entrance from the street of the building in which powder is kept, on which shall be printed in capitals the words, "Licensed to Keep and Sell Gunpowder."

City Clerk to
keep record of
licenses, etc.
Place not to be
changed.

SEC. 4. The City Clerk shall keep a record of all such licenses and of the places designated therein, which places shall not be changed unless by consent of the Mayor and Aldermen, in writing. Every person who receives a license shall sign his name to a copy of the rules prescribed in this ordinance, as evidence of his assent thereto.

SEC. 5. The provisions of this ordinance shall not apply or extend to the keeping or storing of metallic cartridges in fire-proof magazines, nor to cartridge manufacturers, so long as they shall keep their powder in canisters, as prescribed in Sec. 4, and in fire-proof magazines, located and built to the satisfaction of the Mayor and Aldermen, and so long as such manufacturers allow no more than one hundred pounds of gunpowder in any magazine, or five pounds of gunpowder not made into cartridges, to be in any one workshop at any one time.

Exceptions.

Keeping in
magazines.

SEC. 6. No person, except on military duty in the public service of the United States or of this Commonwealth, shall keep, have, or possess, in any building, place, vehicle, ship, or other vessel within one rod of a dwelling-house, any explosive compound other than gunpowder, in quantity exceeding one-fifth of a pound.

Pub. Stats.
chap. 102,
§§ 59, etc.

SEC. 7. The Mayor and Aldermen may license any suitable person to keep, store, and sell such compound, in accordance with the foregoing provisions.

Licenses.

SEC. 8. Any member of the police or of the Fire Department may enter the building or premises of any person so licensed, to make the examination provided by law, at his discretion, and on alarm of fire may cause such compound there deposited to be removed or destroyed, as the case may require.

SEC. 9. Whoever violates any provision of this ordinance shall be liable to a fine not exceeding twenty dollars.

Penalty.

Be it ordained by the City Council of the City of Newton as follows:—

SECTION 1. The Chief of the Fire Department, under the direction of the Mayor and Aldermen, shall have the supervision and charge of all telegraph, telephone and electric lines. He shall forthwith report to the Mayor any violations of this ordinance.

SEC. 2. No telegraph, telephone nor electric line shall be erected nor maintained until the owner thereof shall file with the Mayor and Aldermen a written agreement accepting and promising to abide by and perform all the conditions and provisions of this ordinance, and all orders, rules, regulations and amendments hereafter made in addition thereto.

SEC. 3. All writings and authority for the erection of telegraph, telephone and electric lines shall be subject to the right of the Mayor and Aldermen to permit other lines to be placed upon the same posts ; but this shall not prevent a reasonable compensation therefor.

SEC. 4. On streets where curbstones are set, all posts shall be erected in the sidewalk, within and adjoining the curbstones ; and where there are no curbstones, the posts shall be so erected as not to interfere with the gutters. No post shall be erected within fifteen feet of any hydrant, nor so as to interfere with any water-pipe, shade-tree, drive-way, nor intersection of streets.

SEC. 5. All posts for telegraph, telephone and electric lines shall be straight, properly trimmed and painted, shall

not be less than twenty feet in height from the ground, shall be of iron, cedar or chestnut, and, if of wood, not less than six inches in diameter at the smaller end and ten inches in diameter at the ground. Such posts shall be firmly and properly set in the ground to the depth of at least five feet. Wherever any wire shall cross any street or way, it shall be at a height not less than twenty-five feet above such street or way, and be protected by guards, and, where practicable, cross at right angles.

SEC. 6. All wires for the transmission of electricity for lighting and motive power shall at all times be so insulated as to resist abrasion and heat and be impervious to water. When placed above the surface of the ground such wires shall be suspended upon posts. When any such wire shall be broken, or its insulation become imperfect, the electric current shall forthwith be discontinued and the wire not used until properly repaired and insulated.

SEC. 7. Wires for the transmission of electricity for lighting and motive power shall be secured to insulating fastenings of glass, hard rubber or other approved insulating material. All tie-wires shall be insulated in the same manner as conducting-wires. All joints in wires shall be securely made and wrapped with insulating material that will resist heat and abrasion, and be impervious to water. Continuous wires, without joints, shall be used as far as possible.

SEC. 8. Wires for the transmission of electricity for lighting and motive power, passing through the exterior walls of buildings, shall be firmly encased in substantial tubes of non-conducting material not liable to absorb moisture, and so placed as to prevent water from entering the building along the wire. Outgoing and returning wires for arc-lights shall enter and leave buildings at points one foot

at least from each other; those for incandescent lights shall so enter and leave buildings at points at least six inches from each other. In running along outside walls, cornices, and the like, all such wires shall be rigidly fastened by non-conducting fastenings. In the interior of buildings, all such wires shall be so placed as not to come in contact with iron pipes, posts, nor girders, nor in any way so as to form other circuits or ground connections. In passing through floors or partitions or walls, they shall be surrounded by an insulating tube of substantial material, to protect them from injury by rats and mice. Whenever such wires enter a building, a cut-out of simple form and construction shall be provided, and properly attached as near as possible to such entrance.

SEC. 9. The frame and exposed parts of all arc-lamps shall be insulated from the circuit. All such lamps shall be provided with a separate hand-switch, and also with an automatic switch which will close the circuit whenever the carbons do not approach each other, or the resistance becomes excessive.

SEC. 10. For incandescent lamps, the conducting wire leading to each building and branch circuit shall be provided with an automatic switch or cut-out, or its equivalent, capable of protecting the system from injury by an excessive current of electricity.

SEC. 11. All light and power circuits shall be entirely of metal. No gas, water, nor steam pipe, nor the earth, shall be used as a part of any such circuit.

SEC. 12. In case of fire the Chief of the Fire Department shall have full power and authority to order and cause any electric wires to be cut or removed, and electric currents discontinued until the fire is extinguished.

SEC. 13. Except by vote of two-thirds of all members of the Board of Aldermen, no wire for the transmission of electricity for lighting or motive-power shall be attached to posts of the fire-alarm telegraph nor to the posts of any telegraph or telephone company upon which fire-alarm wires are placed. Such wires, excepting when permitted by a like vote to remain, shall forthwith be removed from such posts, whenever any wire of the fire-alarm telegraph is attached thereto.

SEC. 14. All dead wires shall be removed.

SEC. 15. Upon the completion of any circuit, and before it is used, a plat, showing the location of the wires and posts of such circuit, shall be filed with the Chief of the Fire Department; and any change of such posts or wires shall be reported to him within twenty-four hours.

STATISTICS

From January 1, 1886, to December 31, 1886.

Total of alarms.....	
Alarms by citizens.....	42
By firemen.....	16
By police.....	13
Loss on real estate.....	\$13,171 07
Insurance paid on same.....	\$12,331 52
Loss on personal property.....	\$9,001 75
Insurance paid on same.....	\$7,385 25
Loss in excess of insurance paid.....	\$2,467 00
Total insurance at risk.....	\$153,855 00
Assessed value of real estate at risk.....	\$154,500 00
Total of hydrants.....	471
Miles of street mains.....	78
Pumping capacity per diem.....	5,000,000
Reservoir capacity per diem.....	15,000,000
Miles of accepted streets....	108
Area protected by Fire Department.....	20 square miles
Assessed value of real, personal, corporate and bank stock.	\$34,800,000

CITY OF NEWTON.

ANNUAL REPORT

OF THE

CITY MARSHAL

For the Year Ending Dec. 31, 1886.



Newton:

PRESS OF THE NEWTON JOURNAL.
1887.

CITY MARSHAL'S REPORT.

OFFICE OF CITY MARSHAL,
CITY HALL, WEST NEWTON, Jan. 1, 1887.

To the Honorable Board of Mayor and Aldermen :

I have the honor to submit a report of the work performed by the Police Department during the year 1886, also the condition of the department at the present time.

ARRESTS.

Whole number of arrests	.	.	.	.	.	.	528
Arrests on warrants	.	.	.	.	.	.	231
Arrests without warrants	.	.	.	.	.	.	297
Held for trial	.	.	.	.	.	.	503
Released on examination	.	.	.	.	.	.	25
Females	.	.	.	.	.	.	32
Foreigners	.	.	.	.	.	.	307
Non-residents	.	.	.	.	.	.	146
Minors	.	.	.	.	.	.	119
Number of arrests in 1885	.	.	.	.	.	.	485

ARRESTS AT EACH POLICE STATION.

Station No. 1	.	.	.	.	.	.	58
Station No. 2	.	.	.	.	.	.	56
Station No. 3	.	.	.	.	.	.	326
Station No. 4	.	.	.	.	.	.	88

528

NUMBER OF ARRESTS EACH MONTH.

January	.	.	.	.	.	.	.	.	.	16
February	.	.	.	.	.	.	.	.	.	24
March	.	.	.	.	.	.	.	.	.	35
April	.	.	.	.	.	.	.	.	.	30
May	.	.	.	.	.	.	.	.	.	39
June	.	.	.	.	.	.	.	.	.	79
July	.	.	.	.	.	.	.	.	.	45
August	.	.	.	.	.	.	.	.	.	59
September	.	.	.	.	.	.	.	.	.	48
October	.	.	.	.	.	.	.	.	.	50
November	.	.	.	.	.	.	.	.	.	66
December	.	.	.	.	.	.	.	.	.	37
										————— 528

OFFENSES FOR WHICH ARRESTS WERE MADE.

Arson	3
Assault	1
Assault and battery	62
Assault—felonious	2
Assault on an officer	7
Attempt to commit rape	1
Breaking glass	2
Breaking and entering	19
Concealing mortgaged property	6
Conspiracy	2
Contempt of Court	2

Cruelty to animals	5
Default warrant	1
Disturbing the peace	64
Drunkenness	207
Embezzlement	1
Evading car fare	5
Fast driving	1
Fraud	2
Indecency	3
Insane	9
Larceny—simple	16
Larceny—felonious	6
Lewdness	1
Malicious mischief	1
Non-support of family	2
Peddling without a license	4
Perjury	1
Polygamy	1
Profanity	3
Runaway	1
Stubborn children	4
Suspicious person	6
Suspicion of larceny	1
Tramps	6
Trespass	6
Truancy	7
Violation of city ordinances	12
Violation of the dog law	11
Violation of the Lord's Day	13
Violation of the liquor law	20
Violation of the railroad law	1

FEMALES WERE ARRESTED FOR THE FOLLOWING OFFENSES.

Assault and battery	6
Concealing mortgaged property	4
Disturbing the peace	2
Drunkenness	12
Insane	2
Profanity	1
Simple larceny	5
	<hr/>
	32

NATIVITY OF PRISONERS.

United States	215
Ireland	226
Canada	31
England	24
Germany	23
Sweden	4
France	2
Scotland	2
Switzerland	1
	<hr/>
	528

NATIVITY OF FEMALES WHO WERE ARRESTED.

United States	4
Ireland	25
England	3
	<hr/>
	32

RESIDENCES OF PRISONERS.

City of Newton :

Newton	65
Newtonville	30
Nonantum	81
West Newton	67
Auburndale	15
Lower Falls	20
Upper Falls	25
Highlands	15
Newton Centre	64

 382

Boston	54
Cambridge	24
Watertown	16
Waltham	10
Needham	8
Wellesley	5
Natick	5
Brookline	3
Weston	3
Fall River	3
Malden	3
Framingham	3
Newburyport	2
Dover, Mass.,	1
Fitchburg	1
Lowell	1
Lincoln	1
Southwick	1

Westboro	1
Worcester	1

 528

Arrests have been made on warrants for other police departments as follows :

For Boston	3
For Brookline	2
For Concord, Mass.,	2
For Waltham	2
For Wellesley	2
For Needham	1
For Watertown	1
For Westboro	1

 14

LODGERS.

The following number of persons have been accommodated with lodging:

At Station No. 1	392
At Station No. 3	662
At Station No 4	145

 1,199

Number of females who have been accommodated with lodging

3

In 1885, fourteen hundred and thirty-eight lodgers were given accommodations.

NATIVITY OF LODGERS.

United States	.	.	.	.	.	.	.	.	535
Ireland	.	.	.	.	.	.	.	.	425
England	.	.	.	.	.	.	.	.	126
Scotland	.	.	.	.	.	.	.	.	32
Canada	.	.	.	.	.	.	.	.	28
Germany	.	.	.	.	.	.	.	.	19
France	.	.	.	.	.	.	.	.	9
Sweden	.	.	.	.	.	.	.	.	7
Italy	.	.	.	.	.	.	.	.	6
Wales	.	.	.	.	.	.	.	.	5
Holland	.	.	.	.	.	.	.	.	4
Denmark	.	.	.	.	.	.	.	.	1
Norway	.	.	.	.	.	.	.	.	1
Turkey	.	.	.	.	.	.	.	.	1
									<hr/>
									1,199

MISCELLANEOUS BUSINESS OF THE DEPARTMENT.

Amount of property reported stolen in the city	.	.	.	.	.	.	.	\$977 00
Amount of stolen property recovered	.	.	.	.	.	.	.	888 00
Amount of fines imposed by Court	.	.	.	.	.	.	.	2,133 00
Amount of court fees earned by officers and paid by Clerk of Police Court to City Treas- urer	.	.	.	.	.	.	.	674 16
Imprisonment imposed by Court	.	.	.	.	.	.	.	38 years, and 4 months.
Number of city documents served and posted by members of the department	.	.	.	.	.	.	.	14,000
Number of legal documents served and posted by the City Marshal	.	.	.	.	.	.	.	250
Cases reported to the Medical Examiner	.	.	.	.	.	.	.	6

REPORTS MADE BY PATROLMEN TO THE CITY MARSHAL.

Number of accidents	58
Number of buildings erecting	168
Number of buildings found open and secured	39
Number of cases investigated	62
Number of defective streets	19
Number of defective sidewalks	19
Number of defective water pipes	13
Number of disturbances suppressed	28
Number of fire alarms	41
Fires extinguished without alarm	19
Intoxicated persons helped home	23
Lost children restored to friends	5
Sick and injured persons assisted	27
Stray teams put up	31

LIQUOR LAW.

Number of search warrants for liquor served	20
Number of liquor seizures	17
Number of gallons of liquor seized and brought to the office of the City Marshal	254 1-2

All liquors condemned by Court are turned over to the Chief of the District Police in Boston, in accordance with Section 38, Chapter 100, of the Public Statutes.

POLICE ORGANIZATION.

The force at present consists of a Marshal, one Sergeant and eighteen patrolmen, as follows:

Daniel M. Hammond, City Marshal.

Charles F. Richardson, Sergeant.

George E. F. Baker, Patrolman, on duty at Newton.

Charles T. Bartlett, Patrolman, on duty at Newton.

Noah F. Bosworth, Patrolman, on duty at West Newton.

William G. Bosworth, Patrolman, on duty at Auburndale.

Thomas C. Clay, Patrolman, on duty at Newtonville.

John W. Conroy, Jr., Patrolman, on duty at Nonantum.

Charles E. Davis, Patrolman, on duty at Newtonville and
West Newton.

Charles O. Davis, Patrolman, on duty at Nonantum.

William C. Emerson, Patrolman, on duty at Newton.

Frank B. Fletcher, Patrolman, on duty at Newton Centre.

Ambrose M. Fuller, Patrolman, on duty at Newton Centre.

Robert S. Harrison, Patrolman, on duty at Lower Falls.

James D. Henthorn, Patrolman, on duty at Newton.

Edson C. Holmes, Patrolman, on duty at West Newton.

Charles P. Huestis, Patrolman, on duty at Newton Centre.

Rufus H. Moulton, Patrolman, on duty at Newton Highlands.

John Purcell, Patrolman, on duty at Upper Falls.

John Ryan, Patrolman, on duty at West Newton.

Special Officer John W. Quilty has been on duty most of the year and has been very efficient. His route has been at Nonantum.

Patrolmen Charles T. Bartlett and Thomas C. Clay were appointed during the year.

The day force of patrolmen consists of Henthorn, Charles O. Davis, Charles E. Davis and Huestis.

The day officer at West Newton acts as officer of the Police Court.

Sergt. Richardson acts as assistant to the Clerk of the Police Court.

Appropriation has been made for two additional patrolmen for the coming year, also for a Sergeant for night duty and a Captain for day duty.

Amount of appropriation for 1886	\$21,594 00
Amount expended	21,591 46

Leaving a balance of	\$2 54
--------------------------------	--------

Deduct the amount received from the Clerk of the Newton Police Court as fees earned by the officers and the total cost of running the department is \$20,917.30.

POLICE TELEPHONE.

The Police Telephone has been extended during the year from Station 4, at Newton Centre, to the house of Patrolman Moulton at the Highlands and to the house of Patrolman Purcell at Upper Falls. It now consists of about nine miles of wire and eight instruments, and is very useful in conducting the business of the police and other city departments.

NEWTON POLICE RELIEF ASSOCIATION.

This association, which was organized March 24, 1885, is in good financial condition.

Amount of funds on hand at this date	\$409 00
Paid for sick benefits in 1886 (to three members)	16 00

No benefit is paid until after a member has been sick seven days, then one dollar per day for fifteen weeks, not to exceed that time in any case.

Number of members at present, 18.

The officers for 1886 were :

President— Charles F. Richardson.

Vice-President—Charles E. Davis.

Secretary—William G. Bosworth.

Treasurer—D. M. Hammond.

CITY PROPERTY IN CHARGE OF POLICE DEPARTMENT.

American flags	1
Ash barrels, iron	2
Bed blankets	30
Bedsteads, iron	2
Book cases	1
Brooms	6
Boston directories	1
Cartridges	750
Carpeting, yards	30
Carriages	2
Carriage robes	4
Chairs	15
Clocks	4
Cuspadores	6
Desks	4
Dust brushes	6
Dust pans	6
Feather dusters	8
Fire alarm keys	21
Hand cuffs	20
Hand hose, feet	200
Harnesses	2
Horses	1
Horse blankets	2
Inkstands	5

Lanterns	10
Letter press, with table	1
Looking glasses	5
Lounges	4
Mats	10
Maps	4
Mattresses	2
Mops	6
Newton directories	4
Office books	Lot.
Pails	15
Police clubs, long	24
Police clubs, short	15
Police buttons, dozens	150
Police badges	21
Police belts	24
Police calls	15
Police regulations, copies	130
Police wreaths	14
Rubber mats	4
Revolvers, with holsters	22
Saddles and bridles	2
Sleighs	1
Shovels	10
Tables	4
Thermometers	1
Waste baskets	5
Water wrenches	5
Whips	2
Umbrella stands	1

The Police Station Houses are all in good repair, only the usual yearly cleaning of the cells being needed the coming year. Station No. 3 is greatly in need of better heating

arrangements, for whenever heat is needed in the rooms in the upper part of the City Hall it is almost impossible to keep the rooms occupied by the police and the prisoners as warm as they should be, and it is really dangerous to the health of the officers and others who have to remain there.

During the year the members of the force have been attentive to their duties, only one slight offense having been reported to the committee.

I wish here to thank His Honor the Mayor and the Honorable Committee on Police for their assistance, and for the favors that I have received from them during the year.

Respectfully submitted,

DANIEL M. HAMMOND,

City Marshal.

CITY OF NEWTON.

ANNUAL REPORT

OF THE

OVERSEERS OF THE POOR,

TOGETHER WITH

The Report of the Agent of the Board of Health,

For the Year Ending Dec. 31, 1886.



Newton :

PRESS OF THE NEWTON JOURNAL.
1887.

At the regular meeting of the Board of Overseers of the Poor, held this day, the Annual Report for 1886, as prepared by the Clerk, was adopted by the Board; and he was instructed to present the same to the City Council.

NATHAN MOSMAN, *Clerk.*

WEST NEWTON, Feb. 3, 1887.

BOARD OF OVERSEERS OF THE POOR.

1886.

HIS HONOR J. WESLEY KIMBALL, Chairman, ex officio.

Ward One.

DEXTER WHIPPLE, 9 months.

EDWIN O. CHILDS, 3 months.

Ward Three.

GEORGE H. INGRAHAM.

Ward Five.

HOSEA C. HOYT.

Ward Two.

EDWARD S. COLTON.

Ward Four.

NATHAN MOSMAN.

Ward Six.

GEORGE WARREN.

Ward Seven.

JOHN WARNER.

Committee on Almshouse.

JOHN WARNER.

HOSEA C. HOYT.

NATHAN MOSMAN.

City Almoner and Clerk of the Board.

NATHAN MOSMAN.

Warden of Almshouse.

NATHANIEL D. MOODY

Matron of Almshouse.

MRS. ELIZA A. MOODY,

City Almshouse, Beacon street.

ANNUAL REPORT OF THE OVERSEERS OF THE POOR.

CITY HALL, WEST NEWTON, Feb. 3, 1887.

To His Honor the Mayor and the City Council:—

GENTLEMEN : The membership of the Board of Overseers has remained the same as last year, with the exception of the change made in the third quarter of the year by the decease of Mr. Dexter Whipple, of Ward 1, after having served faithfully and efficiently on the Board since his election in January, 1884. The vacancy thus created in the Board was filled by the election by the City Council of Mr. Edwin O. Childs, a gentleman well fitted, by his knowledge of the affairs of the city, to render valuable service on the Board.

There has been no material change made in the system of furnishing relief from that of the previous year. The duties and responsibilities of Overseers of the Poor are sometimes simple, oftener complicated, but always imperative. One applicant may be reasonable in requests for aid, while another will urge his demands, regardless of reason or justice. In some cases, after much perplexity, little satisfaction is gained in either giving or receiving. The aim in all cases is to give reasonable and needful aid without encouraging a spirit of pauperism. The necessities of the needy and unfortunate, or the criticisms of generous-minded citizens in their behalf, cannot be fully met under the statutes governing the action of Overseers of the Poor. Only relief from present distress is required or allowed in the operations of the Board. Beyond this there is ample scope for the exercise on the part

of citizens of that consideration and charity which would carry to the unfortunate a share in those comforts which go to fill out the lives of the more fortunate.

In the present aspect of the question of public aid, no better work can be accomplished to assist those who in health become destitute than to provide work by which such persons can, without loss of self-respect, earn by their labor for the time the means of self support. The necessity of receiving public aid breaks down self-respect, after which it becomes less difficult to yield to the pressure of want and accept unearned support.

The year has been a favorable one for the work, both with the poor out of almshouse and the almshouse department. The same amount of appropriation in the preceding year was exceeded by the expense in both departments.

The practice of allowing, in case of sickness, medical attendance by the physician usually employed by the family still appears to give satisfactory results to patients and the Board.

Newton Cottage Hospital meets a long-felt want in the community, and many of the wards of the city have here received that treatment which they were unable otherwise to secure, both from lack of means and also from the impossibility of proper care in their home surroundings. These opportunities cannot be procured without large expense, which must be met from some source. The appropriation made by the City Council to the Hospital fund is expected to relieve the Board of some bills for medical attendance, board and nursing, and also to furnish at the Hospital assistance to worthy persons without the necessity of receiving pauper aid.

The whole number of families receiving partial support out of almshouse during any part of the year was 139. The whole number of persons, 411; of these there were—males

169, females 242; under sixteen years of age, 201; having settlement in Newton, 260; having settlement in other cities and towns in the State, 61; having no settlement, 90.

Persons wholly supported out of almshouse during any part of the year are as follows :

State Industrial School, Lancaster	2
Northampton Lunatic Hospital	1
Asylum for Chronic Insane, Worcester	2
Worcester Lunatic Hospital	10
Remaining at present in Insane Hospital	9

The amount appropriated by the City Council for poor out of almshouse was \$8,000.

The amount expended was as follows :

Cash payments	\$131 48
Groceries	2,383 36
Fuel	972 06
Clothing	11 90
Board	260 05
Medical attendance	309 75
Medicine	56 78
Burials	85 00
Feeding tramps and travellers	18 33
Support of insane	1,849 99
Paid other cities and towns	465 68
Commonwealth of Massachusetts	67 58
Salary of clerk and almoner	700 00
Salary of Overseers	350 00
<hr/>	
Total expenditures	\$7,661 96
Receipts from the State, other cities and towns, and friends of the relieved	1,530 87
<hr/>	
Net cost of poor out of almshouse	\$6,131 09

ALMSHOUSE DEPARTMENT.

The number of inmates at the almshouse has not been as low for several years as the past year. There has also been an unusual degree of health, and but one death. Neatness, good order and contentment prevail, and the inmates without compulsion are interested in the affairs of the house and farm, and, when able, participate from choice in the various operations in progress. With all the comfort among those enjoying the privileges of this home, there is a strange reluctance on the part of some in accepting these opportunities when needed by themselves and freely offered by the city. Some of the inmates have seen better days. Many have never known themselves so well provided for before. The matron is considerate, kind and efficient, making, so far as possible, a home for those whom circumstances have led to this place.

The Warden has continued his competent management of the various interests of the farm, contributing largely from its products to the maintenance of the family, and also from sales making good returns in almshouse receipts. The sales of wood the past year have been somewhat larger than an average, and show a corresponding increase in receipts. The farm is in good condition, and producing well by the aid of the inmates and one hired man.

The continued and increasing attention that is given by those interested in real estate to the choice and attractive section within reach of Waban Station, shows that the interests of the city, as well as of those looking for desirable homes, still point toward a change in the almshouse department by removal to some other locality.

Whenever the time shall have come for the city to dispose of the present farm, one year's time would be required in

which to purchase a new location, erect permanent buildings, and vacate the premises occupied at present. It is the sense of the Board that a large tract of land is not necessary to secure the highest results in this department. The sale of the present property should furnish ample funds with which to purchase land, erect and thoroughly equip permanent and first-class buildings in all respects complete.

The number of persons who have been supported at the almshouse for all or part of the year is 34; average number for the year, 24; died during the year, 1.

The whole amount appropriated by the City Council for almshouse expense and repairs, including \$300 from B. & A. R. R. for bridge, was	\$4,300 00
Whole amount expended	3,376 60
Amount received from sale of produce, wood, board, etc.	2,222 20
Almshouse expense and repairs net	1,154 40

The Board acknowledge with gratification the interest which His Honor, the Mayor, has always shown in all matters pertaining to the department, and especially in the business meetings of the Board.

For the Overseers of the Poor,

NATHAN MOSMAN, *Clerk.*

Report of the Agent of the Board of Health.

BOARD OF HEALTH
OF THE
CITY OF NEWTON.
1886.

THE MAYOR, *ex officio*.

ALDERMAN B. S. GRANT.

COUNCILMAN FRANK EDMANDS.

JESSE F. FRISBIE, M. D.

J. FRANKLIN FULLER.

OTIS PETTEE.

Clerk.

ISAAC F. KINGSBURY.

Agent of Board.

NATHAN MOSMAN.

Agent for Inspection of Plumbing.

ALBERT F. NOYES.

MEETINGS: First and third Tuesdays in each month, 4.20 P. M.

REPORT OF THE BOARD OF HEALTH.

CITY HALL, WEST NEWTON, January 4, 1887.

To His Honor the Mayor and the City Council :

GENTLEMEN: The results gained by the Board of Health in its work under the present organization apparently justify its plan and formation. The various interests and elements involved have been brought into compact form, where they can be more readily treated and controlled. The diminished number of complaints indicates either a higher sanitary condition of the city than has existed in former years or a more favorable year. Probably both these conditions exist. Doubtless the attention given by the Board to general and individual health matters has had an educational influence, leading citizens to correct faulty conditions in premises and thus prevent their being brought to the notice of the Board. Attention has been given to all complaints that have been presented, and the usual means have been used for the abatement of nuisances and for enforcing the rules of the Board. The efforts made and the work accomplished appear to have been generally acceptable to citizens.

In matters of health the average community will bear heroic treatment better than neglect. This appears to be the case in Newton, and the efforts of the Board have been directed toward securing a clean city.

The collection of house-offal has been made by contract, as in 1885. During the months of August and September the collection was unsatisfactory and complaints were numerous. It has been difficult to make such a collection as is required by the rules of the Board and by the contract, from the fact that in the corn and fruit season there are large additional accumulations of waste material, and this at the time of the hottest weather, when the most frequent collections are required. The work can only be done by an additional force of men and teams. Such addition was made late in September, after which few complaints were received. Delays in collections are occasionally caused by heavy snow storms in winter.

In March an order was passed by the Board prohibiting the keeping of swine without a license within a radius of one-half a mile of the railroad stations at Newton, Newtonville, Newton Centre, Auburndale, City Hall, West Newton, and within a radius of one-fourth of a mile of the railroad station at Newton Highlands, the Prospect School House at Upper Falls, and the Hamilton School House at Lower Falls. Licenses have been given on application to keep swine in connection with horse stables. Complaints have been so numerous of the nuisance of swine in open pens that few licenses have been granted. This action of the Board has given general satisfaction.

Complaints of the cow-stable nuisance have been continued to such an extent that the order concerning the keeping of swine has been amended so as to include and apply to the keeping of cows. This will not interfere with stables for cows outside of village centres.

In some cases henneries have been so located as to cause discomfort to neighbors. An amicable settlement by change of location has been made in such cases.

The keeping of dog-kennels as a business has been brought prominently before the Board through complaints and hearings. The conclusion reached is, that, however well kept, a dog-kennel cannot be maintained in a first-class neighborhood without bringing it to the grade of a second class neighborhood, reducing the value of property, creating dissatisfaction among owners and tenants, and turning lessees and purchasers in other directions.

The collection and utilizing of ashes in filling low lands has been continued, thereby making great improvement in unwholesome and dangerous localities. The dumping ground at the corner of Jefferson and Maple streets having become offensive in the neighborhood, was closed, graveled, and graded by the proprietors, and is no longer a cause of complaint.

Dead animals found in the city are reported to the police, who cause them to be buried and the bills for the same to be presented for payment to the Board of Health.

The silk factory at Boyd's Pond having been closed, the water in the pond became offensive in consequence of not being drawn off as usual. Permission was obtained of the proprietor to draw off the water when necessary, which was done with satisfactory results.

Complaints having come from citizens of Watertown and the State Board of Health of a nuisance caused by the soap factory near Charles River, recently removed from Pearl street, the Board visited the factory. Improvements were suggested, which were adopted by the proprietor, since which no complaints have been received.

Howes' Block Ward 1, which had become unsafe in its sanitary arrangements, has been refurnished with approved plumbing by the proprietor, a new and large cesspool built, and at present appears to be in a safe and satisfactory condition.

By recommendation of the Board, Newton water has been carried from Walnut street across the swamp land by Bulbough's Pond, on Homer street, to Cold Spring City, where the water supply was apparently unwholesome, and where sickness had been common. This work will be of great importance to the present and future of this growing village.

The call for a system of sewers continues to be pressed upon the attention of the Board, especially by those who have a large amount of business on a limited amount of land, and by those who suffer great inconvenience from their peculiar location. The system at present in use to cover this want is capable of accomplishing an almost unlimited amount of work when put in perfect order and enlarged to a capacity equal to the demand. It is believed that a small part of the interest expense necessary to carry the debt of an adequate system of sewers would thoroughly equip and operate a force of odorless excavators which would be equal in quality and amount of work to all demands of the city until some satisfactory system of sewerage can be agreed upon.

Summary of nuisances and sources of disease where action has been taken:

Catch-basin foul	3
Cesspool defective	8
Cesspool rebuilt	2
Cesspool new	2
Cesspool overflowing	17
Drain defective or broken	24
Drain emptying into street, gutter, or brook	10
Drain emptying on surface of land	13
Hennery offensive	4
Hens in cellar	2
House ventilation defective	3
Manure exposed and offensive	10

Offal on land	6
Offensive odors in house	7
Piggeries and pig pens removed	9
Premises filthy	11
Privy vault defective	10
Privy vault removed	1
Privy vault cleansed	23
Sewage in cellar	11
Sink-pipe not trapped,	10
Stables removed	2
Stable offensive	8
Stagnant water in stable cellar	4
Stagnant water on surface of land	11
Vaults and cesspools cleansed by contractor	930
Vault poorly ventilated	7
Wells polluted	3
Wells closed	2
Water in cellar	3

The comparative freedom of the city from diseases dangerous to public health has been a marked and gratifying feature of the year. Of twenty-three cases of typhoid fever seventeen appeared in August, September, and October; and in several instances the sickness immediately followed a visit to the country or the seashore, where apparently the disease was contracted. The cases of scarlet fever reported are more numerous than last year, being fifty-three against twenty-eight in 1885. The cases were widely scattered and generally mild in type. Of diphtheria there have been nineteen cases reported, against 102 in 1885. The total of the three diseases reported is 95. Total in 1885, 149; total in 1884, 188.

REPORTED CASES OF DISEASE DANGEROUS TO PUBLIC
HEALTH.

DISEASES REPORTED.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Fatal.
Typhoid fever . . . . .	..	..	2	..	..	..	..	4	5	8	2	2	23	6
Diphtheria . . . . .	..	1	4	1	2	..	..	..	..	1	5	5	19	3
Scarlet fever	5	2	5	4	15	3	4	2	1	3	5	4	53	1

The mortality rate per 1,000 of population in nineteen cities of the Commonwealth in the year 1885, as taken from the state reports, shows a most favorable condition in Newton as a city for homes and residences, its mortality rate being the lowest of them all, as follows, viz.:

Boston	24.09
Worcester	17.38
Lowell	18.45
Cambridge	20.57
Fall River	19.55
Lynn	16.68
Lawrence	15.16
New Bedford	23.68
Somerville	16.68
Salem	19.21
Springfield	18.24
Holyoke	19.14
Chelsea	19.49
Taunton	17.84
Gloucester	16.73
Haverhill	18.37

Waltham	16.19
Malden	15.27
Newton	13.79

The membership of the Board has remained unchanged during the year.

Respectfully submitted,

For the Board,

NATHAN MOSMAN,

Agent.

ANNUAL REPORT
OF THE
SCHOOL COMMITTEE
OF THE
CITY OF NEWTON.

1886.

VOL. XLVII.



Newton:
PRESS OF THE NEWTON JOURNAL.
1887.

ORGANIZATION OF THE SCHOOL COMMITTEE.

JANUARY 1886.

HON. J. WESLEY KIMBALL, MAYOR, CHAIRMAN, *ex-officio*.
 JAMES W. FRENCH, PRESIDENT COMMON COUNCIL, *ex-officio*.
 FISHER AMES, CHAIRMAN.
 THOMAS EMERSON, SECRETARY AND SUPERINTENDENT.

<i>Elective Members.</i>	<i>Wards.</i>	<i>Term of office expires.</i>
EDMUND W. CONVERSE	I.	January, 1889.
CHARLES H. STONE	I.	" 1889.
JOHN W. DICKINSON	II.	" 1889.
A. AMELIA SMEAD	II.	" 1889.
FISHER AMES	III.	" 1888.
GEORGE A. WALTON	III.	" 1888.
WILLIAM S. SMITH	IV.	" 1888.
ISAAC HAGAR	IV.	" 1888.
JOHN A. GOULD	V.	" 1887.
ALBERT B. PUTNEY	V.	" 1887.
CHARLES C. BARTON	VI.	" 1887.
WILLIAM D. PHILBRICK	VI.	" 1887.
GEORGE W. SHINN	VII.	" 1887.
ALONZO S. WEED	VII.	" 1888.

STANDING COMMITTEES.

High School.—Fisher Ames, John W. Dickinson, William S. Smith, George W. Shinn, Edmund W. Converse, Charles C. Barton, William D. Philbrick, and the Mayor, *ex-officio*.

Evening Schools.—George W. Shinn, Alonzo S. Weed, George A. Walton.

Music.—George W. Shinn, A. Amelia Smead, Albert B. Putney.

Drawing and Writing.—A. Amelia Smead, Charles H. Stone, Albert B. Putney.

Industrial Drawing.—John A. Gould, Charles H. Stone, James W. French.

Sewing.—A. Amelia Smead, George W. Shinn, William D. Philbrick.

Text-Books.—Charles C. Barton, William S. Smith, Alonzo S. Weed.

Rules and Regulations.—William S. Smith, Alonzo S. Weed, George A. Walton.

Salaries.—Edmund W. Converse, James W. French, John W. Dickinson.

Schoolhouses.—Isaac Hagar, Charles H. Stone, John W. Dickinson.

Accounts and Printing.—Isaac Hagar, Fisher Ames, George A. Walton.

DISTRICTS.

NEWTON CENTRE.

CHARLES C. BARTON, Newton Centre.	WILLIAM D. PHILBRICK, Newton Centre.
JOHN A. GOULD, Newton Upper Falls.	ALBERT B. PUTNEY, Newton Highlands.
JAMES W. FRENCH, Newton.	

UPPER FALLS.

JOHN A. GOULD, Newton Upper Falls.	ALBERT B. PUTNEY, Newton Highlands.
ISAAC HAGAR, Newton Lower Falls.	WILLIAM D. PHILBRICK, Newton Centre.
CHARLES C. BARTON, Newton Centre.	

AUBURNDALE AND LOWER FALLS.

WILLIAM S. SMITH, Auburndale.	FISHER AMES, West Newton.
ISAAC HAGAR, Newton Lower Falls.	JOHN A. GOULD, Newton Upper Falls.
GEORGE A. WALTON, West Newton.	

WEST NEWTON.

FISHER AMES, West Newton.	GEORGE A. WALTON, West Newton.
JOHN W. DICKINSON, Newtonville.	WILLIAM S. SMITH, Auburndale.
A. AMELIA SMEAD, Newtonville.	

NEWTONVILLE.

JOHN W. DICKINSON, Newtonville.	A. AMELIA SMEAD, Newtonville.
ALONZO S. WEED, Newton.	CHARLES H. STONE, Newton.
EDMUND W. CONVERSE, Newton.	

NEWTON.

GEORGE W. SHINN, Newton.	CHARLES H. STONE, Newton.
EDMUND W. CONVERSE, Newton.	ALONZO S. WEED, Newton.
JAMES W. FRENCH, Newton.	

CITY OF NEWTON.

IN BOARD OF SCHOOL COMMITTEE, Oct. 27, 1886.

The Chair appointed the following-named members as the committee to prepare the Annual Report, viz.: Fisher Ames, George W. Shinn, Charles C. Barton, J. W. Dickinson, W. S. Smith and John A. Gould.

IN BOARD OF SCHOOL COMMITTEE, Dec. 22, 1886.

The Annual Report was presented by Mr. Ames, and accepted.

Ordered, That twenty-five hundred copies of the Annual Report be printed.

THOMAS EMERSON,
Secretary.

REPORT OF THE SCHOOL COMMITTEE.

To the Citizens of Newton :

The School Committee herewith submit their forty-seventh annual report.

The general course and history of the schools during the year have been of quiet, steady work and satisfactory progress, without the occurrence of any unusual or remarkable events.

The most important fact to be noted is the steady continuance of increase in enrollment and attendance. This increase has been quite general in all the schools, except those in one or two wards, and is especially marked in the High School and in Ward 3. The statistical tables in the annexed report of the superintendent give the figures in detail.

In regard to the amount and quality of the work accomplished during the year, the Board have reason to be gratified. Although there is always room for advancement, there has been a decided improvement during the year. The teachers are more than ever awake to the necessity for improvement in methods, and the Board have endeavored to help and encourage them in this direction. The difficulties of a teacher's position are perhaps not fully appreciated by the public. Their work gives but little opportunity for independent and original thought or action, or for growth and

expansion, in its constantly repeated round of duties under similar conditions year after year, and the danger of lapsing into mechanical and perfunctory methods is constant and pressing. It is so much easier to hear a recitation than to teach; that is, to impress the pupil with the underlying principles, awaken attention, observation and thought, and cultivate powers of expression and reasoning, it is no wonder that slight mental or physical disturbances or the distractions of the school-room should interfere with the freshness and vigor of the teacher impair the value of the work done, and make it difficult to get out of the rut of routine. Due allowances are to be made for these difficulties, and every effort made to counteract them. Improvement of methods may be of assistance, and the Board have endeavored to effect such improvement. The recent modifications of the courses of study both in the grammar and high schools provide for greater attention to topical and objective methods, and to studies which arouse interest and observation. In the study of physiology, hygiene and the effects of stimulants and narcotics, for instance, the Board have introduced a number of text books with illustrative charts and models, from all of which, by the investigation of a topic by the pupil, or its explanation and illustration by the teacher, lessons are to be prepared, instead of by memorizing the text of any one book, which is an easy but very unsatisfactory way of teaching subjects of this class. It is not intended to decry the value or importance of memorizing for school work, but perhaps too much of it has been done heretofore, and too little attention given to the training of the other mental powers. In this respect the free text-book law is of great value and assistance, as it enables the Board without extra expense to supply a much greater variety and amount of text books, especially fresh reading matter, which, in the

lower grades particularly, gives much interesting food for thought.

It may be remarked here that the law has also undoubtedly increased the attendance upon the schools, and that in these and other ways it has proved a success, justifying the wisdom of its enactment, and completely meeting the objections of its opponents.

There has been no change in the general policy of the Board in regard to the arrangement of school work, except in the preparatory course for the High School. The fact that the average age of pupils entering the school was higher than was desirable, (15 3-12), led to an attempt to remedy it by reducing the preparatory course from nine to eight years, with the necessary modifications in the studies. Hopes were entertained also that the grammar school course might thus be made more complete and well proportioned by itself, a year being added (the ninth) as a finishing year for those whose education, so far as the public schools are concerned, closes with the grammar school. But after a trial of two years, it has been found difficult to properly adjust the grades, and confusion and uncertainty arising, it was deemed best to revert to the former system. It seems as if the difficulty of adjusting the graded system to both extremes of a class as well as to the average is unavoidable. It is, however, to be hoped that some method may be found for promotion of the more advanced scholars without undue pressure or injustice to the average of the class, for whom the schools are especially to be adapted.

In the selection and appointment of teachers during the year, the Board has again had the benefit of the long experience and good judgment of the Superintendent, who has made the selections with great care and with a single purpose to secure the best obtainable. A continuance in this policy,

with the salaries paid, will insure the maintenance of the high standard which our schools have attained, and help to raise it in the future.

No new buildings have been added during the year, but a beginning has been made upon a new high school, and a considerable amount of repairs upon other buildings made which were greatly needed. The privies of the Underwood school, which, by leakage, had become offensive and dangerous have been removed, and a new set of water-closets put into the basement. The exteriors of the Adams, Mason, Underwood and Pierce schools have been painted, and some tinting done to the interiors of the Franklin, Underwood and Pierce. Improvements have been made in the windows of the upper rooms of the Hyde and Jackson, and additional heating apparatus furnished in the High and Mason schools. There has been some improvement of the school-grounds in some localities, and in celebration of "Arbor Day," quite a number of trees and shrubs were set out in various school-yards by the children, and also by village improvement societies. Repairs more or less extensive are still needed in the Mason, Hyde, Pierce, Franklin, Davis, Claffin, Jackson, Lincoln and Bigelow schoolhouses, and the yards of many of them need grading, concreting and grassing. The increase in Ward 3 renders some provision desirable for additional grammar school accommodations, which can probably be best obtained by an addition to the Pierce schoolhouse, giving it six or eight rooms, so that all the grammar grades may be under one master in the same building. It would have been a wise policy to build in each district a central grammar school building with outlying primaries, as it is the most economical as well as convenient and advantageous, but at present the buildings are such that this system is not practicable in every ward. In all future additions or new con-

structions it is hoped that this plan will be followed as far as possible. It is desirable to avoid the maintenance of two or more grammar schools with all the additional and unnecessary expense involved, where one would answer the purpose.

The question as to the care and control of public halls and rooms in school buildings, which was heretofore in some uncertainty, has been settled by its concession by the city council to the school committee. It is probable that the uses for which these halls will be let will be substantially the same as in the past, with every effort to exclude all improper or objectional uses. The matter of small interior repairs of school buildings has also been satisfactorily arranged with the city government.

The year has been on the whole quite free from any serious interruption by epidemic or dangerous diseases, and the average of attendances has been very good.

The no-recess plan continues to give satisfaction, and no complaints are made of injury or inconvenience therefrom.

High School.

The increase of enrollment and attendance at the High School has continued. The record of enrollments for the last five years is as follows:

1882	.	.	.	.	.	.	302
1883	.	.	.	.	.	.	311
1884	.	.	.	.	.	.	337
1885	.	.	.	.	.	.	389
1886	.	.	.	.	.	.	424

and at the beginning of the present school year, 456.

The working capacity of the present building has long since been passed, and the necessity of increased accommoda-

tions is evident. The only question has been as to what plan to adopt, and there has been much discussion and many suggestions have been made and considered. As is probably unavoidable in such matters, there has not been entire unanimity of opinion, and some delay has resulted, but the question has been finally determined, and a section of a new building has been commenced on the present location, to be used for the present needs of the school, the other sections to be completed when required in the future. This plan was adopted in the interests of economy, utilizing the present building and avoiding the inconvenience of destroying one building before other accommodation is provided. The location is an excellent one, and by the wise and liberal action of the city council a lot of land was added in the rear and a strip on the north, extending the lot to the adjacent court, making it certain that the supply of light and air cannot be cut off or seriously interfered with, and affording room for a suitable display of the handsome features of the new building. It is expected that the new section under construction, with the old building, will be sufficient for the needs of the school for a few years longer, although, in view of the defects of the present building, the final completion of the new building will be gladly welcomed.

This increase in numbers has rendered it necessary to appoint an additional teacher. Thirty-five scholars to each teacher is usually considered the maximum number that can be well managed; but the attendance of four hundred gave forty to each of the ten teachers, including the head master. The school entered upon the year without the additional help, but it soon became evident that it was impossible to do justice to either teachers or pupils, and appointment was made of Miss Emma F. Johnson.

During the year the courses of study have received careful revision, somewhat more of breadth and variety has been given them, and the number of English exercises and elective studies increased. In the study of physics and chemistry new apparatus and furniture have been provided, the old apparatus being worn out, and arrangements made for better facilities for personal examination and study by pupils of the objects provided. The accommodations for these studies, however, in the present building are very poor, and especial provision is to be made for them in the upper story of the new building now under construction. The lack of accommodation for the military drill still causes a good deal of unnecessary trouble and expense. The plan of a drill hall which was prepared last spring and submitted to the city council outgrew the proportions originally contemplated, and involved a greater expense than was thought judicious, and the matter was referred back to this board by the city council. The subject of military drill has since been revised, and with a view to avoid all unreasonable interference with studies or danger to immature physiques, it has been made optional in the first and fourth classes, and careful physical safeguards provided. The favor with which the drill is regarded is shown by the fact that all but about ten in the first and fourth classes have taken part in it. The battalion in fact numbers about 175, which is more than the supply of muskets, and it is desirable that a few light guns be obtained for the smaller boys. The increase in numbers of course increases the difficulties attending the drill. The armory hall is not large enough, and its use is attended with unnecessary waste of time and expense to the city and to the boys. It would seem as if the construction of a building to cost not more than five thousand dollars, large enough for a fair accommodation of the drill and not too large for use for gym-

nastics, graduation or other school purposes, and perhaps some proper outside uses, would be very desirable, the interest on the cost of which would not exceed if it would equal the yearly cost imposed upon the city and the boys under the present arrangement. The calisthenic exercises still labor under the same difficulties as heretofore, aggravated by the increased numbers. It is hoped that on the completion of the new section more room can be found for them. It is satisfactory to be able to report that the interest in the exercises is well sustained, and their benefits are appreciated. The completion of the circuit railroad, after some delay in regard to the lowering of the fares, now furnishes improved means of transportation for the pupils, but the use of the barges from Newton Centre and the Highlands is still required.

Besides the appointment of an additional teacher, as above mentioned, we have to record the resignation of Mr. Fiske, the military instructor, Capt. Frank N. Brown being appointed in his place, and the granting of leave of absence for a year to Miss Pond, the teacher of drawing, and appointing Mrs. Emma F. Bowler in her stead. The school work has been quite satisfactory, although during the first three months we labored under the disadvantage of an insufficient teaching force, and the crowded condition of the building makes the preservation of order more difficult than it otherwise would be.

The purchase of a new piano during the year has added not a little to the convenience and pleasure of the school.

In accordance with custom the names of the graduating class are appended. The exercises of graduation day were well attended, and were above the average in excellence and interest. Of the graduates about the usual proportion entered the colleges and Institute of Technology.

GRADUATES.

FOUR YEARS' COURSE.

CLASSICAL.

LEIGHTON CALKINS,
 RAYMOND CALKINS,
 CARITA A. CHAPMAN,
 CLINTON L. EDDY,
 STEPHEN EMERY,
 HARRY H. HASKELL,

FREDERICK H. HOVEY,
 WILLIAM M. JONES,
 EDWARD P. KELLEY,
 NELLIE F. MORRISON,
 WILLARD REED,
 CORA L. STEWART.

GENERAL.

ROSALIE AMES,
 ALICE ANGIER,
 ANNA R. BASSETT,
 GRACE W. BRYANT,
 ADRIANNA V. BUNKER,
 EDWARD P. CALDWELL,
 MARGARET E. CAREY,
 ALICE M. CARPENTER,
 MARGARET E. CONDRIN,
 HARRIET M. CORDINGLY,
 JOHN CUTLER,
 KATHERINE M. DAVIS,
 MARY A. DIX,
 AUSTIN E. DOHERTY,
 SARAH DORNEY,
 WALTER ELLIS,
 EDITH M. FARLEY,

ALICE D. GILMAN,
 ALICE G. HOLMES,
 MARY HOWLAND,
 MABEL R. HUSSEY,
 ISABELLA P. JONES,
 EDITH LEACH,
 ELIZABETH G. LEONARD,
 STEPHEN WALLACE MOORE,
 ANNIE PLUMMER,
 WILLIAM Z. RIPLEY,
 LILIAN E. ROGERS,
 ANNIE R. SMITH,
 HENRY P. SPAULDING,
 MABEL S. STEWART,
 SARAH E. STUNTZ,
 GRACE WADSWORTH,
 CARRIE A. WELLINGTON,

HENRY WHITMORE.

THREE YEARS' COURSE.

CHAUNCEY B. ALLEN,
 CARRIE L. BABCOCK,
 JOHN B. BLOOD,
 JOHN A. BOND,
 WILLIAM C. BROWN,
 HELEN CHOATE,
 LILLIE A. COBB,
 MABEL COLLINS,
 BENJAMIN P. DRESSER,
 FRANKLIN M. ELMS,
 WILLIAM J. FARQUHAR,
 MARY B. FIELD,
 NETTIE E. FLEMING,
 JOHN P. FREESE,

HERBERT W. HADDOCK,
 GILBERT HUBBARD,
 FRANK I. JONES,
 GEORGE LINDER, JR.,
 JOHN P. MARTIN,
 STELLA MAY,
 JOSEPH NEWHALL,
 ELIZA PHILBRICK,
 JANE A. PRESTON,
 TIMOTHY W. QUINN,
 JAMES E. ROLLINS,
 CHARLES M. SCUDDER,
 DANIEL SULLIVAN,
 ALBERT E. TAPPAN.

In the several districts there is but little to record beyond the statement already given of repairs made and required. There have been some changes in the force of teachers, as shown by the list annexed to the report of the superintendent herewith published.

In the Williams school the resignation of Mr. Chandler is much regretted; also that of Miss Laura Saltonstall.

In West Newton the increase in attendance has rendered it necessary to appoint a new teacher, and additional accommodations will soon be needed as before noted.

In Newtonville the Claflin school needs repairs, and the discomforts and inconvenience attending the use of the upper rooms continue.

In Newton the change in the Underwood school has already been mentioned. Repairs are needed in the Bigelow and Lincoln schools.

In the evening school the attendance averaged 53, the total enrolment being 152, (males 89, females 63.) The school was kept open three nights in each week for fifteen weeks. The industrial drawing required by law was furnished at this school. The work of the school was quite satisfactory for the time at disposal. In music there is little new to report. The work for the year has been on the whole very satisfactory. In sewing the interest continues, and by special request it has been extended to the eighth class in some districts. It has been found necessary to employ an additional teacher on half time.]

In closing this report the board are unwilling to pass over without some expression of regret the retirement from the committee of Mr. John A. Gould, the senior member, who, after thirty years of continuous and faithful service, declined a renomination. His associates will always carry

with them an agreeable recollection of his unfailing courtesy and pleasant ways and greatly miss him in their labors.

The statement of Mr. Gould reviewing his connection with the schools of the city is of such general interest that by vote of the board it is appended:

“As my official relations with the schools of Newton, covering a period of thirty consecutive years, will close with the present year, I may be excused if I speak briefly of the changes that have taken place and the progress made in the schools during that time.

In the school report for 1857, it is stated that “six years have now passed since, by the abolition of the district system, the present organization of the schools was adopted and the entire management of the school affairs entrusted to the superintending Board. This movement at its inception did not meet with unanimous favor, but it is believed that these doubts and objections have gradually yielded before the light of experience, etc.,” but my experience was that the conversion was far from being complete. Then the whole number of children in town between five and fifteen years of age was 1216, number of schools, 22; appropriations for teachers salaries, \$10,153.63; fuel, \$865.41; care of houses, \$495.99; total \$11,850.00; unexpended balance, \$334.97. A comparison of these figures with the statistics for the present year will show the growth of the schools and the increase of expenses during the past thirty years. At the present time the number of children between five and fifteen years of age is 3,785, number of schools is 86 and the number of teachers 101. The appropriations for the present year are as follows: Salaries of superintendent and teachers, fuel and care of rooms, \$101,300; incidentals, \$9,500; evening school, \$550; conveyance of pupils, \$805; total, \$112,115.

There was then no purely High School, the higher branches being taught in the grammar schools at the Centre,

West Newton and at Newton, but they did not meet the wants of the town, and in 1859 the High School building was erected, and the school was opened on the 6th of Sept. with 75 scholars under Mr. J. N. Beals and Miss Amy A. Breck, from which beginning the school has grown to its present magnitude.

For the greater part of my time of service, the selection of teachers was left largely with the local committee, which has not always insured fitness for the position. Now the duty of selection is left with the superintendent, which is the only way to elevate schools above the high position which they now occupy.

My motto has ever been that "as is the teacher so is the school;" and with this constantly in mind, have been able to secure those of marked ability, both male and female, who have honored Newton while with us and when called to more desirable positions elsewhere. After one or two years of rather doubtful success in regard to masters, and having become fully convinced that teaching was a different art from that of simply hearing recitations from a book, we were fortunate in securing the services of Mr. James F. Claflin, still a teacher in the High School at Chicago, and to whom we are indebted more than to any one else for so quickly organizing these schools and bringing them into the front rank according to the often expressed opinion of the late Dr. Bigelow, where they have since remained with remarkable uniformity. The masters who followed Mr. Claflin are Mr. P. C. Porter, C. W. Hill, principal of the new "Martin" School, Boston, Hon. Levi C. Wade, D. S. Farnham, A. L. Harwood, Walter C. Frost, and the present master, C. E. Hussey.

Soon after the death of Dr. Bigelow, in 1866, whose services on the committee were equivalent to those of a superintendent, the employment of one was often discussed,

but no action was taken until '71, when Mr. Thomas Emerson, the present incumbent, was engaged. After two years' service he was induced to leave us, and for some years the schools did not uniformly receive the benefit which the employing of a superintendent should give them, owing to the frequent changes that occurred. But of one of them I should be unjust to my convictions of duty should I fail to speak. The very valuable service rendered to our schools by Dr. Ephraim Hunt while here, by the introduction of improved methods of teaching, and by suggestions to the teachers, will bear fruits which we shall long continue to gather. In the fall of '84, after an absence of eleven years, Mr. Emerson was induced to return, which insures the prosperity of the schools while he is with us, as he is worthy of the confidence and encouragement of all interested in them.

When I entered the board I found faulty methods of teaching. This was especially true of reading and mental arithmetic. These faults have been corrected, and for the teaching of these branches it is probable that the schools of no city are better equipped than ours.

The introduction of free hand and mechanical drawing is a valuable acquisition to school work.

In regard to the complaints often made as to overwork, I have not seen an instance where that was the cause of sickness.

Of the evils to guard against, one of the greatest is the inclination of teachers to do the thinking and work for the pupils, the habit and art of study being one of the most valuable acquisitions of the school room, and there is no greater demand for judgment and tact in the teachers than to decide just how much assistance to give their pupils.

The acquaintances that I have formed with the members

of the boards with whom I have been associated, many of whom have left us, have been exceedingly pleasant, but with none have my relations been so intimate as they were for nearly nine years with the late Dr. Bigelow. He was entirely unselfish in all his acts, and had at heart only the best interests of all the schools. None knew him but to love and respect him.

To the members of the present board, I wish to return my sincere thanks for the kindness which I have received at their hands.

To the citizens of Newton, of the past and present time, I tender my thanks for the honor which they have conferred upon me by my election and continued re-election to the responsible position which I have occupied for so long a time. I am grateful for the opportunity given me to share in the work of bringing the partially organized schools of thirty years ago to the satisfactory condition in which they are at this time."

FISHER AMES,
Chairman of the Committee.

SECRETARY'S REPORT.

APPROPRIATIONS AND EXPENDITURES FOR 1885.

General appropriations for schools,	\$101,300 00	
Received from the dog tax,	2,081 23	\$103,381 23
Transferred to school incidentals,	6,000 00	
" " conveyance of pupils,	90 00	6,090 00
		<u>\$97,291 23</u>
Amount paid to the superintendent,	\$2,750 00	
" " " " teachers,	\$2,045 60	
" " " " janitors,	5,906 04	
" " " " secretary,	300 00	
" " " for fuel,	5,515 79	
Amount expended,		96,517 43
Balance unexpended,		<u>\$773 80</u>
School incidentals,	\$9,500 00	
Transferred from general appropriation,	6,000 00	\$15,500 00
Amount expended,		15,452 89
Balance unexpended,		<u>\$47 11</u>
Evening school,		\$550 00
Amount expended,		532 98
Balance unexpended,		<u>\$17 02</u>
Conveyance of pupils,	\$715 00	
Transferred from general appropriation,	90 00	805 00
Amount expended,		785 00
Balance unexpended,		<u>\$20 00</u>

RECAPITULATION.

APPROPRIATIONS.

Total amount, including dog tax,	\$114,146 23
----------------------------------	--------------

EXPENDITURES.

General appropriation,	96,517 43
School incidentals,	15 452 89
Evening school,	532 98
Conveyance of pupils,	785 00
	<hr/>
Total amount expended,	\$113,288 30
	<hr/>
Balance unexpended,	\$857 93
	<hr/>

THOMAS EMERSON,
Secretary.

December 22, 1886.

SUPERINTENDENT'S REPORT.

To the School Committee of Newton:—

In compliance with the rules of the Board I respectfully present my annual report of the condition of the schools for the year 1885-6. The schools were in session forty weeks, beginning September 14, 1885, and ending July 2, 1886.

A general exhibit of the results of the last school census, of the number of school buildings and the value of the school property, of the enrolment and attendance of the pupils, and of the cost of the schools, will be found in the following statistics.

POPULATION.

Population of the city, State census of 1885 . . .	19,759
Number of persons in the city between five and fifteen years of age, May 1, 1886 . . .	3,785
Number of pupils between five and fifteen years of age attending the public schools in May, 1886 .	3,116
Number of pupils between five and fifteen years of age in private schools	152
Number of persons between five and fifteen years of age not attending school	517

SCHOOL BUILDINGS.

Number of school houses	21
Number of buildings rented for school purposes . .	1

Number of occupied rooms, May 1, 1886	. . . 90
Number of unoccupied rooms, May 1, 1886	. . . 8
Total number of rooms, May 1, 1886	. . . 98
Number of halls, May 1, 1886	. . . 5
Total number of sittings, May 1, 1886	. . . 454

The total value of the school houses, furniture, apparatus, and land in use during the past school year is \$522,100.00. The following table gives the value of the school property in detail :

High School buildings, furniture, and land	\$57,000 00
Mason school house, furniture and land . . .	49,100 00
Hyde school house, furniture, and land . . .	24,000 00
Prospect grammar school house, furniture, and land	31,000 00
Prospect primary school house, furniture, and land	7,500 00
Oak Hill school house, furniture, and land . .	12,000 00
Hamilton school house, furniture, and land . .	28,000 00
Williams school house, (old) furniture, and land	10,000 00
Williams school house, (new) furniture, and land	35,000 00
Pierce school house, furniture, and land . . .	32,000 00
Davis school house, furniture, and land . . .	13,000 00
Franklin school house, furniture, and land . .	15,000 00
Clafin school house, furniture, and land . . .	35,000 00
Adams school house, furniture, and land . . .	22,000 00
Bigelow school house, furniture, and land . .	42,000 00
Underwood school house, furniture, and land .	24,000 00
Lincoln school house, furniture, and land . .	5,500 00
Jackson school house, furniture, and land . .	15,000 00
Eliot school house, furniture, and land . . .	19,000 00
Rice school house, furniture, and land . . .	20,000 00

Barnard school house, furniture, and land,	21,000 00
School apparatus	5,000 00
	<hr/>
	\$522,100 00

SCHOOLS.

High School	1
Grammar Schools	48
Primary Schools	36
Mixed School	1
Total,	86

TEACHERS.

Number of teachers in High School	10
Male teachers, 3; female teachers, 7.	
Special teachers in High School	3
Male teachers, 1; female teachers, 2.	
Number of teachers in Grammar Schools	48
Male teachers, 10; female teachers, 38.	
Number of teachers in Primary Schools	36
Number of teachers in Mixed School	1
Special teachers of sewing	2
Special teacher of music	1
Whole number of teachers	101
Male teachers, 15; female teachers, 86.	

ENROLMENT AND ATTENDANCE.

Whole number of pupils enrolled, 1885-6	4,106
Whole number of pupils enrolled, 1884-5	4,027
Increase	79
Average whole number of pupils enrolled, 1885-6	3,527.7
Average whole number of pupils enrolled, 1884-5	3,356.5
Increase	171.2
Average number of pupils in daily attendance,	
1885-6	3,238.8

Average number of pupils in daily attendance,	
1884-5	3,047.2
Increase	191.6
Average per cent. of daily attendance, 1885-6 .	91.8
Average per cent. of daily attendance, 1884-5 .	90.8
Increase	1
Whole number of tardinesses, 1885-6	5,105.
Whole number of tardinesses, 1884-5	4,955.
Increase	150.
Whole number of pupils enrolled in Evening	
School, 1884-5	152
Whole number of pupils enrolled in Evening	
School, 1883-4	110.
Increase	42
Average number in attendance, 1884-5	98
Average number in attendance, 1883-4	62
Increase	36.

The following table shows the total enrolment, average whole number, average attendance, and per cent. of attendance in the schools, from 1877 to 1886, a period of ten years. The increase in the total enrolment of pupils during this period was 724; in the average whole number, 843; in the average attendance, 785.

	Total enrolment.	Average whole number.	Average of attendance.	Per cent. of attendance.
1877.....	3,382	2,684.4	2,453.8	91.5
1878.....	3,354	2,740.7	2,527.1	91.9
1879.....	3,397	2,791.7	2,540.9	91.
1880.....	3,418	2,824.4	2,571.3	91.5
1881.....	3,677	2,844.7	2,588.3	91.
1882.....	3,759	3,092.7	2,796.7	90.4
1883.....	4,002	3,170.3	2,903.8	91.6
1884.....	3,963	3,275.9	2,992.9	91.4
1885.....	4,029	3,356.5	3,047.2	90.8
1886.....	4,106	3,527.7	3,238.8	91.8

The following table shows the entire cost of the schools, exclusive of the amount expended for the Evening School and for new school buildings, from 1877 to 1886. It also shows the cost per pupil based upon the average whole number belonging. The lowest cost per pupil, \$29.56, was in 1879, the highest, \$37.65, was in 1883. The difference is due to the large expenditure for permanent repairs in the latter year. The average cost for the ten years was \$32.54.

The aggregate cost of the Evening School during the corresponding period was \$5848.21, being an average of \$584.82 per year.

The amount expended for new school buildings from 1877 to 1886 was \$98,146.84.

Cost of the Schools, 1877-1886.

Year	Whole cost.	Average whole number.	Cost per pupil.
1877.....	\$87,577.56	2,684.4	\$32.62
1878.....	86,839.17	2,740.7	31.68
1879.....	82,521.04	2,791.7	29.56
1880.....	86,397.64	2,824.4	30.59
1881.....	87,669.48	2,844.7	30.82
1882.....	94,885.43	3,092.7	30.68
1883.....	119,359.75	3,170.3	37.65
1884.....	109,103.42	3,185.9	34.25
1885.....	111,032.56	3,356.5	33.25
1886.....	121,154.20	3,527.7	34.35

The comparative cost of the schools may be gathered from the following tables. The first is a graduated table in which the cities in the State are numerically arranged according to the percentage of their taxable property appropriated to the support of public schools for the year 1885-6. The second is a similar exhibit of the cities and towns of Middlesex County.

The statistics of the schools of the State and County are inserted here for the convenience of those who do not have access to the report of the Secretary of the State Board of Education from which they are taken.

For 1885-1886 by
the State Valua-
tion of 1885.

	CITIES.	Percentage of Val- uation appropriated to Public Schools equivalent to mills and hundredths of mills.
1	Waltham	\$004-37
2	Haverhill	4-14
3	Gloucester	3-86
4	Newton	3-58
5	Somerville	3-45
6	Fitchburg	3-38
7	Lynn	3-35
8	Worcester	3-34
9	Northampton ..	3-27
10	Malden	3-23
11	Holyoke	3-20
12	Chelsea	3-17

For 1885-1886 by
the State Valua-
tion of 1885.

	CITIES.	Percentage of Val- uation appropriated to Public Schools equivalent to mills and hundredths of mills.
	Cambridge	\$003-13
	Fall River	3-10
	Taunton	3-03
	Brockton	2-89
	Lowell	2-89
	Salem	2-83
	Lawrence	2-68
	Springfield	2-68
	Newburyport	2-65
	New Bedford	2-59
	Boston	2-02

TOWNS AND CITIES OF MIDDLESEX COUNTY.

1	Hudson	\$004-99	28	Medford	\$003-40
2	Marlborough	4-81	29	Melrose	3-35
3	Stoneham	4-42	30	Acton	3-32
4	Waltham	4-37	31	Malden	3-23
5	Natick	4-36	32	Framingham	3-21
6	Wakefield	4-35	33	Cambridge	3-13
7	Littleton	4-32	34	Shirley	3-06
8	Ashland	4-28	35	Wilmington	3-06
9	Ashby	4-08	36	Pepperell	3-01
10	North Reading	4-01	37	Bedford	3-00
11	Concord	3-92	38	Lexington	2-95
12	Westford	3-90	39	Lowell	2-89
13	Arlington	3-79	40	Everett	2-87
14	Boxborough	3-76	41	Maynard	2-83
15	Wayland	3-74	42	Weston	2-74
16	Watertown	3-71	43	Sherborn	2-69
17	Tyngsboro	3-66	44	Dracut	2-60
18	Woburn	3-65	45	Dunstable	2-59
19	Hopkinton	3-62	46	Lincoln	2-34
20	Winchester	3-61	47	Burlington	2-27
21	Newton	3-58	48	Stow	2-24
22	Ayer	3-57	49	Carlisle	2-16
23	Townsend	3-51	50	Belmont	2-12
24	Holliston	3-48	51	Sudbury	2-03
25	Somerville	3-45	52	Tewksbury	2-00
26	Chelmsford	3-44	53	Billerica	1-91
27	Reading	3-43	54	Groton	1-82

Comparing the towns and cities of the State with reference to the percentage of their taxable property appropriated to the support of public schools during the past year, we find that Newton is the fourth among the twenty-three cities of the State, the twenty-first among the forty-seven towns and cities of Middlesex County, and the one hundred fifty-second among the three hundred forty-eight towns and cities of the State. Newton makes liberal appropriations for the support of its schools, but these statistics show that twenty towns and cities in the county and one hundred fifty-one in the State contribute even more liberally in proportion to their wealth.

A more detailed exhibit of the statistics of the schools will be found in the tables appended to this report.

Table I shows the number of persons in the city between five and fifteen years of age, May 1, 1886, by wards.

Table II shows the number of rooms, halls, sittings, pupils, teachers, number of pupils to a teacher, number of pupils over fifteen years of age, and number under five years of age, in each school, May 1, 1886.

Table III shows the semi-quarterly attendance, by schools, for the year ending July 2, 1886.

Table IV shows the total enrolment, attendance, etc., by schools, for the year ending July 2, 1886.

Table V shows the number of pupils and their average age, by grades and classes, in September, 1885.

Table VI shows the annual enrolment in each grade and class, in September, 1876-1885.

Table VII shows the percentage of the total annual enrolment in each grade and class, in September, 1876-1885.

Table VIII shows the distribution of the pupils in the High School by classes and courses of study.

SCHOOL CENSUS.

The general statutes require the School Committee annually, in the month of May, to ascertain, or cause to be ascertained, the names of all persons between the ages of five and fifteen years belonging to their respective cities and towns on the first day of May, and to make a record thereof. In conformity to this requirement of the statutes, an enumeration of the school population of the city was made in May last, and a record of the same has been deposited in this office.

The school population of the city on the first day of May, 1886, was 3,785, an increase of 174 as compared with the year 1885. By reference to Table I in the appendix to this report, it will be seen that there is an increase in all the wards except the sixth. In the sixth there was a decrease of one.

The number of pupils between five and fifteen years of age attending the public schools on the first day of May, 1886, was 3,116. The number in private schools was 152, making the total number of pupils between five and fifteen years of age in the public schools of the city and in private schools on the first day of May, 1886, 3,268. Deducting this sum from 3,785, the total school population of the city, we have 517, which is the number of persons in the city, between five and fifteen years of age, not attending any school, public or private, on the first day of May, 1886. Of this number 54 were at work in mills and elsewhere, and 396, more than three-fourths of whom were under seven years of age, were at home, leaving 67 to be accounted for, a decrease of 87 as compared with last year. It is possible that a comparison of the school registers with the record of enumeration may reduce still further the number to be accounted for.

SCHOOL BUILDINGS.

The number of school buildings in use during the past year was twenty-one. Twenty of these are the property of the city. The school at Thompsonville occupied a rented building. The whole number of sittings, including those in the leased building was 4,543.

It is gratifying to be able to report a marked improvement in the condition of some of our school buildings. Much-needed repairs and alterations have received attention, and liberal provision has been made by the City Council for further progress. The Mason, Hyde, Pierce, Franklin, Davis, Claflin, Jackson, Lincoln, and Bigelow school houses are still in need of repairs and improvements more or less extensive. A vigorous prosecution of the work during the coming year is demanded by every consideration of health, comfort, and economy.

In my last annual report I called the attention of the Board to the need of better accommodations for the school at Thompsonville, the leased building occupied by the school being unattractive, inconvenient, and deficient in regard to light, ventilation, and other essential appointments. A building of two rooms will be sufficient to meet the probable wants of that locality for the next ten or fifteen years. I again respectfully submit the matter for your consideration.

I beg leave also to remind you of the need of additional school accommodations at West Newton. At the regular meeting of the Board in April last, I submitted the following facts and suggestions in regard to the matter. "The total enrolment of pupils in the West Newton District, May 1, 1885, was 583. The total enrolment, April 26 of the present year, was 646, an increase of 63. Should this rate of increase continue, it will probably be necessary to open another room before the close of the next school year. The

children in this district are at present accommodated in four school buildings—the Pierce, the Davis, the Barnard and the Franklin. The Davis and Barnard schools include the primary grades and the fourth and fifth grammar grades. The Franklin School includes the primary grades and the fourth, fifth, and a portion of the sixth grammar grades. The Pierce School includes a portion of the sixth and the seventh, eighth, and ninth grammar grades.

It is quite desirable that the pupils of the grammar grades should be gathered into one building, and it is equally desirable that the other buildings should be occupied exclusively by the primary grades. Accordingly I recommend that additional accommodations be provided at the Pierce School and that the pupils of the grammar grades now attending the Davis, Franklin, and Barnard schools be transferred to the Pierce School as rapidly as the circumstances will justify the change. It will be greatly to the advantage of the Franklin School if the sixth grade can be transferred at the beginning of the next school year. I am not prepared to submit a definite plan for providing the additional accommodations needed. All the rooms in the Pierce School, with the exception of the hall, are now occupied. It may be thought advisable to utilize the hall by dividing it into two rooms as has been done at the Hyde, Claflin, Adams, and Jackson schools. Or it may be well to enlarge the present building by the addition of two or more rooms. Or some better plan may be devised."

I may add that the crowded condition of the Franklin and Davis schools in September last compelled the transfer of between forty and fifty pupils to the Pierce School, and the opening of another school in the hall of that building. A presentation of these facts to the City Council can not fail to secure prompt action.

ATTENDANCE.

The duty of the city to maintain "a sufficient number of schools for the instruction of all the children who may legally attend public school therein" carries with it a corresponding obligation on the part of those parents who are patrons of the schools to see to it that their children, so far as it is consistent with a prudent regard for their health, shall be constant and punctual in attendance.

To what extent has this obligation been met? The statistics already given furnish a definite answer to this inquiry. The average daily attendance has been ninety-one and eight tenths per cent. of the average whole number belonging to the school. The average daily absence was eight and two-tenths per cent. That is, out of an average enrolment of 3,527 pupils, there was an average daily attendance of 3,238, and an average daily absence of 289. In other words the number of pupils who were absent every school day for the entire year was more than enough to form seven schools of forty pupils each. The per cent. of absence in the several schools varies from three and six-tenths per cent. to twelve and four-tenths, the lowest per cent. being in one of the grammar schools, and the highest in one of the primary schools. Referring to the last report of the Secretary of the State Board of Education, I find that, in a table in which all the towns in the State—348 in number—are numerically arranged according to the average attendance of the children of school age upon the public schools, Newton occupies the one hundred eighteenth place.

Schools are provided for the accommodation of all the pupils enrolled. Whether the pupils are present or absent, the cost of the schools is the same. The absences of the past year, amounting in all to 57,800 days, involved a waste of eight per cent. of the entire cost of the schools. Is it

probable that all or even a majority of them were necessary and unavoidable? Was it from necessity that one pupil out of every twelve was absent every day in the year? If so how can we account for the discrepancy among the different schools? Why should there be a difference of nearly eight per cent. between two of the grammar schools, and a difference of five per cent. between two of the primary schools? Is it because the necessities of one locality are so much greater than those of another? In a city like ours the conditions that affect the problem we are discussing must be essentially the same.

Again, why should the per cent. of attendance in the High School be from five to six per cent. less than in some of the grammar schools? It can not be on account of the greater distance that the pupils of the High School are obliged to travel, for a large number of them use the cars, the barges, or a private conveyance in going to and returning from school.

I confess my inability to offer a satisfactory explanation of these differences, and am forced to the conclusion that irregular attendance is more the result of habit than necessity.

Another growing evil in our schools is tardiness. The whole number of tardinesses during the past year was 5,105, an increase of 150 as compared with last year. This seems a large number, especially when we consider the length of the sessions and the long intermission between them, the extent and excellent condition of our sidewalks, and the fact that our schools are within easy reach of most of the pupils that attend them. If all these tardinesses were unavoidable, why is there a difference of more than one hundred fifty per cent. between two schools of the same grade, and, as far as we can judge, organized and working under similar conditions?

Again, we should expect to find the largest percentage of tardinesses in the primary grades, a considerably smaller percentage in the grammar grades, and a minimum percentage in the High School. What are the facts? The Rice and the Jackson schools—composed exclusively of primary grades—had a total enrolment of 454 pupils, and an aggregate of 428 tardinesses, while the High School, with an enrolment of 431 pupils, had an aggregate of 1,688 tardinesses.

Furthermore, the records of attendance in the High School show that the tardinesses are confined chiefly to a comparatively small number of pupils, more than fifty per cent. of all the tardinesses for the year being recorded against the names of somewhat less than ten per cent. of the pupils. The largest number recorded against the name of any pupil was fifty-three, while seventeen pupils were neither absent nor tardy during the entire year.

I regret that I am unable to give the number of dismissals in the several schools during the year and the number of days lost thereby. Observation and inquiry, however, leave little room for doubt that the record in this particular also is far from satisfactory. It should be stated, moreover, in justice to the great body of pupils and patrons of our schools, that irregular attendance, whether in the form of absence, tardiness, or dismissal, is confined chiefly to a limited number of pupils in each school. The people are loyal to the public schools, and are unwavering in their support. They recognize the excellences and defects of the system, and show a generous appreciation of every attempt to improve it. It is in their behalf that I would urge that some check should be placed upon this gross waste of time, labor, and money. The highest interests of the many should no longer be sacrificed to the indifference or the whims of the few.

The remedy for these evils is with the parents. The home and the school should be brought into closer relations. Parents and teachers should work together in every measure that pertains to the well-being of the school. Parents should be led to see "that the duties of the school constitute the regular business of the child so long as he remains a member of the school, and that all other work should be made subordinate to this. If parents allow a son to become a clerk for some tradesman, they do not feel at liberty to keep him from his employer one or two days every week. If errands are to be done in the morning, he is not expected to do them unless he can do them and still be on time at his employer's office." Just so it should be with the child while at school. Then the performance of school duties is his regular business. And parents should feel no more at liberty to interfere in the one case than in the other. Parents should come to feel that school duties ought to take the precedence of all others so long as the child is a member of the school; that among these duties is that of regular and punctual attendance; that irregular attendance is an offence against the community, whose substance, freely given in support of its schools, is thereby wasted; that it is an injustice to the school, in that thereby the cares and labors of the teacher are increased, and the progress of the pupils is retarded; and that it is an injury to the child who is allowed to form habits that will lead to bankruptcy in business, and disorder, waste, and discontent in the home.

TRUANTS AND DISOBEDIENT PUPILS.

At a meeting of the Board, held February 25, 1885, a motion to appoint truant officers, with a view to a more thorough enforcement of the truant law, was referred to the committee on rules and regulations. At a meeting, held April 22, this committee submitted the following report:—

“1. The School Committee are charged with the duty of securing the attendance upon the schools, of all children of school age, not otherwise under instruction.

“Your committee have secured, through the Superintendent and teachers of the schools, the names of a considerable number of persons between seven and fifteen years of age that are not attending any school, public or private. They assumed that the list would be enlarged if a thorough canvass were made.

“2. By law, the School Committee are required to appoint two or more truant officers.

“Your committee, believing that the duties of the office in this city can be efficiently performed by one competent officer, recommend the appointment of two truant officers for the current year, the first of whom shall be paid at the rate of three hundred dollars per year and all necessary travelling expenses, subject to approval of the committee on accounts and printing of this Board.

“3. It shall be the duty of such paid officer, in addition to the duties prescribed in chapter 48, section 11, of public statutes, to co-operate with the superintendent and teachers to secure the uniform attendance upon the schools of all children of school age not otherwise under instruction and in all ways, within his power, to supplement the discipline of the schools.”

The report was unanimously adopted, and Martin C. Laffie was appointed first truant officer, with a salary of three

hundred dollars a year and all necessary travelling expenses. At a subsequent meeting of the Board, held January 27, 1886, Mr. Laffie was authorized to incur such expense for livery, not to exceed twenty-five dollars a month, as may be necessary to render his services thoroughly efficient.

In order to give full effect to the law, it was necessary that a suitable place should be provided for the confinement, discipline and instruction of such pupils as might be convicted of truancy. The attention of the City Council being called to the matter, an ordinance was passed early in the year designating the Lawrence Industrial School for that purpose.

Mr. Laffie has rendered efficient service during the past year, and the wisdom of the Board in their action upon this important matter has been fully confirmed. Three hundred and seventy-four cases of absence have been investigated during the year. As some of the parents are disposed to shield their children from the operation of the law, it is difficult to tell just how many of these absentees were truants, and how many were absent with the permission of their parents. It is probable that not less than one-third were truants.

Seven boys have been convicted as habitual truants. Three of them were sent to Lawrence, and the remaining four are still on probation. The cost for board and tuition at the Lawrence Industrial School is two dollars and fifty cents per week. I am informed that the school is now full, and that no more pupils can be received at present. This is to be regretted, as the institution seems to be admirably adapted to meet the wants of that class of boys to whom more than ordinary restraint is needful.

In this connection I wish to call your attention to another class of pupils who seem to me to require exceptional treatment. I refer to those boys who are constitutionally obstinate and refractory, "who persistently refuse to comply with the

reasonable rules and regulations of the schools," and thus set at naught the authority of the teacher, whose example is pernicious, and whose presence is a constant menace to the good order and the morals of the school. It is gratifying to know that this class of pupils is not numerous in the schools of Newton. Still their number is sufficient to occasion solicitude in the minds of many thoughtful parents and teachers. Being beyond the reach of the ordinary and approved means of school discipline, they require special consideration and are entitled to the largest measure of our charity and wisdom. For good or for evil they are soon to be citizens of our Commonwealth. What shall be done with them? Shall we attempt to reform them by a resort to corporal punishment? Possibly their present condition is due to a too liberal use of this means of discipline. At least public opinion will not tolerate so vigorous a use of the rod as would be needful to secure their reformation. Shall they be suspended from school? Suspension means still greater opportunities for that evil communication that corrupts good manners. Shall they be kept in school to the injury of the well-disposed and obedient? "Parents have a right to demand that the community that assumes the education of their children shall see that they are protected from the influence of such as these."

This question is receiving attention in other places, and is exciting considerable interest among the friends of public schools. The School Board of the city of Cambridge has the matter under consideration at the present time. Superintendent Coggs well, who has had a large experience in the management of schools, and has given much thought to this subject, believes that additional legislation is needed, such legislation as will give authority to deal with incorrigible pupils in the same manner as habitual truants are now dealt with.

"It is the universal testimony of teachers," says Mr. Coggswell, "that often a single scholar by his example and influence seriously interferes with the progress of a whole class, and makes it impossible to secure that harmony of feeling which is essential to the awakening of the best and noblest impulses of our nature. This disturbing element should be removed from the schools. How it can best be done is a problem involving many difficulties. Each town is now required to provide a suitable place for the confinement, discipline, and instruction of truants, and of children between seven and fifteen years of age who may be found wandering about in the streets, or public places therein, having no lawful occupation or business, not attending school, and growing up in ignorance.

"Why should not this law be amended so as to include among the classes of children affected by its provisions those who persistently refuse to comply with the reasonable rules and regulations of the school? Let us look at the practical working of this law, and then consider its probable effect, if amended as suggested, upon the class of children under consideration.

"Under the truant law habitual truants and absentees from school between the ages of seven and fifteen can be committed by the court having jurisdiction to any institution of instruction provided for the purpose, for a term not exceeding two years. In looking over the reports of our truant officers for five years, I find that the average yearly number of truants thus committed has been ten and six tenths, fourteen being the largest number in any one year. These facts, however, do not show the full value of the law. The importance of the services of the truant officers is not to be judged by the number of truants brought before the court, or even by the number of cases of truancy which have occurred during

the year; but rather by the number of children now in our schools, who, but for the watchful care and personal influence of these officers, would be wandering about the streets, exposed to the dangers and temptations of a vagrant life. The wisdom of enacting the truant law is no longer questioned, for the beneficial results are too apparent.

“Were this law changed as proposed, I am confident that equally desirable results would be secured under the amendment. The number who would receive sentence would be comparatively small, but the very existence of the law would be a restraint upon every pupil inclined to do wrong, and it would also have a salutary effect upon the parents of such children, causing them to co-operate more heartily with the teachers in their efforts to secure proper respect and obedience.”

Mr. Coggsell goes on to discuss somewhat in detail the character and administration of such a school as he proposes, and then briefly restates the whole subject as follows:

“1. There are pupils in our schools who seriously interfere with the work, and some plan should be devised by which these pupils may no longer be a hindrance to the progress of our schools.

“2. This result can be secured in only one of two ways, —by the reformation of these pupils, or by their removal from the schools. With public sentiment as it is, the endeavor to reform them by corporal punishment is inexpedient.

“3. Removals should be made only by ‘due process of law’; and all pupils thus removed should be provided with equal advantages in a special school.

“4. This school may be the truant school modified and improved, or it may be a school established exclusively for this class of scholars.

“5. The number of scholars sent to this school would be

comparatively small, but the effect of sending the few would be a powerful restraint upon every pupil inclined to do wrong.

“6. The object of the plan proposed is two-fold: first, to remove from our schools a disturbing element; and, second, to benefit the very scholars who are removed.”

I concur with Mr. Cogswell as to the need of additional legislation, and trust that such an amendment to the truant law as he suggests will receive the approval and support of this Board.

Your attention is invited to one other phase of this question. The general statutes, chapter 48, section 14, provide that “If three or more towns in any county so require, the county commissioners shall establish at the expense of the county, at convenient places, therein, other than the jail or house of correction, truant schools for the confinement, discipline, and instruction of minor children convicted under the provisions of sections ten and twelve [of the truant law]; and shall make suitable provisions for the government and control and for the appointment of proper teachers and officers thereof.”

I recommend that we avail ourselves of these provisions of the statutes and that for this purpose we invite two or more of the neighboring municipalities to join with us in a petition to the county commissioners for the establishment and maintenance of a school to which truants and, in case the legislature shall give the requisite authority, those pupils “who persistently refuse to comply with the reasonable rules and regulations of the schools,” may be sent for discipline and instruction. A school of this character would be a lasting benefit to children who need the restraints of such an institution, while the withdrawal of this element from our schools would very much increase their efficiency and usefulness. I commend the subject to your consideration.

AUTHORITY OF TEACHERS.

My attention has been called, on several occasions during the past year, to the misconduct of pupils going to and returning from school. On investigation I have found that the misconduct complained of is confined chiefly to a few boys whose perverse spirit and vicious habits are in striking contrast to the excellent tone and conduct of most of the pupils of our schools. I have found, too, a reluctance on the part of teachers to attempt the control of these boys beyond the limits of the school, lest they might thereby assume to exercise authority that they do not possess, or in regard to the possession of which there is more or less of doubt in the public mind. It is surprising that any doubt should exist in regard to a question of such vital importance to the morals and good order of the community. I believe that no good citizen who will carefully examine the subject can fail to be convinced that the general statutes of the commonwealth give the teacher full authority in the matter, and that the highest good of the schools and of the community demands that he shall exercise that authority. Moreover the teacher has no option in the matter. The laws that clothe him with authority impose upon him a duty commensurate with that authority. He can not evade this duty if he would; he should not if he could. A strict performance of this duty on the part of the teacher is an obligation that he owes to the public and to his school, and especially to those members of it who are most in need of direction and restraint.

This view of the authority and duties of the teacher is set forth fully and clearly by Judge Lord in the case of a teacher who punished a boy for a misdemeanor committed out of school hours. It was not claimed that the punishment was unduly severe, but that the teacher had no right

to punish the boy for misconduct out of school. In his charge to the jury the judge used the following language: "The relation between the teacher and the scholar is a peculiar one. It partakes, while the pupil is in school, of a parental character, and is absolute and without appeal from any quarter, when exercised within its proper limit. Such is also the power of the parent. His authority is absolute at home on the same conditions. A good parent desires to cooperate with the teacher, and is thankful for any proper correction of his child. A good teacher desires to aid parents by training his pupils in habits of good order and obedience to authority. Between the school and the home the jurisdiction of teacher and parent is concurrent. If the teacher sees or knows a boy to violate the laws, if he finds him acquiring habits of a dangerous character, if he sees him becoming vicious, and his example injurious to others, or calculated to affect his own standing at school or at home, it is his duty to interfere, to restrain and reform. For this purpose it is his right to punish to a reasonable extent, if no other method will avail. But the teacher must hold himself responsible to the law in his punishments, and be careful not to transcend in severity its humane and proper limits."

"There seems to be no reasonable doubt," says a Vermont court, "that the supervision and control of the master over the scholar extend from the time he leaves home to go to school till he returns home from school. Most parents would expect and desire that teachers should take care that their children, in going to and returning from school, should not loiter or seek evil company, or frequent vicious places of resort."

In a case in Iowa where expulsion from school was directed for violation of rule in relation to absence and tardiness, the following rule was laid down: "If the effects of

acts done out of school hours reach within the school room during school hours, and are detrimental to good order and the best interests of the pupils, it is evident that such acts may be forbidden. The view that acts, to be within the authority of the school board and teachers for discipline and correction, must be within school hours, is narrow and without regard to the spirit of the law and the best interests of our common schools. It is in conflict, too, with authority."

The judicial decisions in other States confirm the opinions of the two courts already quoted. If I have been able to catch their spirit correctly, "the power of all teachers of schools, and of committees or other managers under whose direction they act, is a parental authority, to be exercised for the best good of the whole," and it is the duty of the teacher by the exercise of this authority "to maintain the purity and discipline of the school, and secure the great public objects for which it was established." In the discharge of this duty he is expected to take cognizance of all acts that tend directly to impair the usefulness of the school. "By common consent and by the uniform custom in our New England schools," says one of the judges already quoted, "the master has always been deemed to have the right to punish such offenses. Such power is essential to the preservation of order, decency, decorum, and good government in schools."

I will leave this topic with a single additional suggestion. The possession of this power by the teacher by no means involves a frequent exercise of it. The fact that such a power exists is in most cases sufficient to restrain all but the most turbulent from committing those offences that make its exercise necessary. There is little doubt that our teachers feel compelled to resort to corporal punishment with much less frequency from the fact that under the regu-

lations of the Board that mode of punishment is possible. I commend the subject to your serious consideration.

FREE TEXT-BOOKS.

The law requiring all the cities and towns of the State to furnish text-books and other school supplies free of charge to the pupils of the public schools, has been in operation two years. I have heard no complaint in regard to it from parents, teachers, or pupils, and have reason to believe that in its practical working it is quite satisfactory to all.

The number of text-books in use during the past school year was 26,659; the number of reference books was 1,683. They were distributed as follows:

	Text Books.	Reference Books.	Worn out.
High.....	3,898	87	14
Mason	3,101	268	63
Hyde.....	1,532	108	16
Prospect.....	2,083	142	1
Hamilton	1,239	120	21
Williams.....	1,864	175	18
Pierce.....	4,024	254	19
Clafin.....	1,550	123	6
Adams.....	1,651	101	20
Eliot.....	2,310	134	65
Bigelow.....	3,407	171	39
Total	<u>26,659</u>	<u>1,683</u>	<u>282</u>

The amount expended for new books during the year was \$3,280.94. The amount paid for rebinding books was \$356.56. The number of books worn out during the year was 282.

EVENING SCHOOL.

The Evening School was in session three evenings each week from November 2, 1885, to February 15, 1886. The number of sessions was forty-five.

The whole number of pupils enrolled was 152—males, 89; females, 63. The largest attendance at any session was 93 and the smallest was 16. The average attendance was 53.

The work done in this school was very satisfactory. Industry and good order prevailed, and the several classes made commendable progress.

Instruction was given in the common English branches, book-keeping, and industrial drawing.

This school needs and deserves better accommodations. It should have all the advantages and attractions of the day schools, and should be in every respect as thoroughly equipped for its work. I would suggest that the upper rooms of the present High School building may be made available for this purpose, when the new accommodations for the High School are completed.

COURSES OF STUDIES FOR THE HIGH SCHOOL.

One of the most important events in the history of the schools during the past year was the adoption of revised courses of studies for the High School. The primary and grammar schools are local, the number of those who have a special and immediate interest in each is limited. The High School is for the use of the whole city, and every citizen takes or should take a deep interest in everything that pertains to its well-being.

Into this school are gathered the best fruits of our elementary schools. From it are graduated the young men and women who, in the near future, are to fill places of trust and responsibility, and to whom the educational, social, political, indeed all the important interests of our city are to be entrusted. It is proper, then, that the training received at this school should be practical, thorough, and enduring, to the end that those who may go forth from it from year to

year may be prepared "to do their whole duty in life" and to increase in strength and beauty of character. A course of study that shall secure such training must be comprehensive and liberal. It should make provision for the symmetrical and harmonious development of all the faculties. To fulfil this high purpose it should be in accord with the best educational thought of the past and the present. While embodying the lessons of experience, it should abound with the spirit of our modern life. Furthermore, since to individuals are given "diversities of gifts," it should be adjusted, so far as is consistent with thorough mental training, to their varied tastes, aptitudes, and purposes. "Harmonized diversity is the tree when the tree has grown to its full."

A liberal education, apart from physical development, has a threefold object: (1) the training of the intellectual faculties; (2) the building up of character; and (3) the acquisition of useful knowledge. In the preparation of the revised curriculum these three phases of education have been kept steadily in view. Nor has their relative importance been overlooked. The mind that is a storehouse of useful knowledge is a rich possession, the ability to acquire that comes from intellectual training is of great value, but character is more to be desired than all knowledge or the ability to acquire it. In a school devoted to liberal study, truthfulness, self-control, and a high sense of honor should stand for more than superior attainments in science or literature or art. Again the comparative difficulty in the attainment of these objects has been considered. "The teacher can impart information directly by securing the interest of the pupil. The intellectual faculties can be led to perform exercises sure to strengthen them. But efforts to form character must be largely indirect and unconscious, 'dropping like the gentle dew' from an atmosphere of purity and love created by the

teacher among his pupils. The influence of living example in the teacher will do more to mould the character of the child than the truths of history and philosophy. In the power of the teacher to lead his pupils rests the main influence of the school for good."

The selection of subjects to be included in a liberal course of study, the determining of the relative value of these subjects, and the assignment of each to its proper place are a delicate and difficult task. In the performance of this work advantage has been taken of the experience and wisdom of others. An attempt has been made to shape a scheme of study that shall be in harmony with what is best in modern educational thought.

This curriculum is divided into required, alternative, and elective studies. In the required studies there are five exercises a week, in the alternative studies four, and in the elective studies three with the exception of Latin and algebra which have five exercises each.

It will be observed that in this curriculum fuller and more systematic provision than heretofore has been made for the study of English language and literature, history, and philosophy. They constitute most of the required studies. The next prominent place is given to the natural sciences. They include most of the alternative studies. Mathematics and the foreign languages are placed among the elective studies. In other words, the required studies are chiefly literary branches, the alternative studies are chiefly scientific, and the elective studies are taken in about equal proportions from each of these classes.

The number of exercises assigned to the different subjects included in the general course of studies is as follows:— To English studies, including English language and literature, and history, 800; to the natural sciences and philoso-

phy, 640; to mathematics, 680; to Latin, 800; to German, 240; to French, 480; to drawing, 480; to military drill, 320; to calisthenics, 320. The average time given to each exercise is from forty to fifty minutes.

“The place to be given to the study of language in any scheme of higher education has always been recognized; and it is unnecessary here to discuss its advantages. As a means of mental discipline, it cultivates a wide range of faculties; and its contribution to the intellectual and general structure of the man is a singular combination of solid and graceful elements. But this principle has generally been applied only to foreign or dead languages; and, of course, there are many points of difference between the study of these and of a native tongue, as also in the results of the two. But the essential benefits of the study of language are to be derived as well from that of our own as of other languages; and this is just the point which has not been recognized generally, and which makes the prominence here assigned it a new application of the old principle. And there are two reasons, among others, why preference should be given it in a high school course. First, that it is our own language, a thorough knowledge of which is certainly most useful to the greatest number, and, second, that the study of other languages in a high school course is necessarily elementary, while this is already so far advanced as to lead us immediately into the study of a rich and varied literature, unrivalled in the history of human speech and thought, and creating a taste for the same, which is necessarily of incalculable advantage to the pupil. This advantage, that the study of language becomes the study of a literature, belongs to other linguistic studies in college, but in the high school to the English alone.

In the natural sciences we have a wide range of studies, all of them, except in their most elementary forms, yet

unstudied, cultivating a distinct class of mental powers necessary to the completeness of the intellectual structure, and embracing numerous practical ends; all of which vindicates the place here assigned them.

As regards the study of mathematics, the reasons which make us relegate that into the list of elective studies are, first, that it has already been pursued in the grammar school as far as many minds find it either agreeable or profitable. It becomes in these more advanced stages entirely distasteful to them, and, instead of an exercise of the reasoning powers and the understanding, it becomes largely a mere exercise of the memory; both of which reasons vitiate its usefulness in the direction of discipline. And, secondly, its practical uses are certainly very essentially narrowed for most men after the arithmetic has been learned.

But the question to be discussed here is not the absolute, but the relative value of certain studies in a high school course; and, in considering this, there are two fundamental objects to be consulted,—the mental discipline belonging to these studies, and their practical uses. For we do not choose to consider these as antagonistic and mutually exclusive ends, but as objects mutually corrective, and capable of adjustment and combination.”

Again, in this curriculum provision is made for the study of most of the branches in two or more separate courses, or cycles—an elementary course and an advanced course. Physics, for example, is a required study from January to May of the first year. This course is elementary. An advanced course in the same subject is an alternative study from September to January of the second year, while a course of laboratory work is an alternative study from September to January in the fourth year. There is a similar assignment of the work in chemistry. An elementary course

is required in the second year, an advanced course is an alternative study in the third year, and a course in laboratory work is an alternative in the fourth year. In all these courses intellectual training is the chief aim, and the acquisition of knowledge is made subordinate and incidental.

Furthermore, this scheme of studies provides for four distinct departments, the general, the Institute, the classical, and the mercantile.

The general course covers a period of four years, and includes the usual literary and scientific studies of a high school.

The Institute course covers a period of four years, and furnishes preparation for admission to the Institute of Technology and other scientific schools.

The classical course also covers a period of four years, and furnishes preparation for admission to any American college.

The mercantile course is intended for pupils desiring special preparation for business, and comprises the first three years of the general course.

The scope of the work in the Institute and classical departments is determined by the requirements of the scientific schools and colleges. The electives in the fourth year of the classical course are introduced to meet the new demands at Harvard. It would greatly simplify the work of this department if the colleges would agree upon a uniform standard for admission.

The High School then, through its revised curriculum, offers every pupil admitted to it four lines of study, leaving it to the parent in each case to determine which of the four shall be pursued. In some instances it will be difficult to decide. In such cases the parent will naturally seek counsel from the teachers or others who are in a position to advise in regard to the matter.

The work of the Institute and classical departments, as has already been remarked, is determined by the requirements of the scientific schools and the colleges. In all the colleges except Harvard these requirements are fixed and definite. The extension of the elective system at Harvard compels the partial adoption of the system in this department of the High School. This is a necessity if the school is to respond to all the demands of the college, or rather if the school is to prepare its graduates to avail themselves of the varied opportunities that the college offers.

To those who enter the general department, constituting about two-thirds of the entire school, a larger choice is offered. The minimum number of exercises per week for any pupil in the general course is fourteen, of which twelve are prepared exercises. Of the twelve prepared exercises, nine are in required and alternative studies and three are in optional studies. For example, five exercises in English and four in science are required of each pupil in the first year. One elective study must also be taken. It may be Latin, Algebra, French, drawing, or commercial arithmetic and book-keeping. But a pupil is not limited to a single elective. Two or even three may be taken if the time and strength of the pupil are equal to the task. Some of the pupils should be allowed to take only one. Others—and a much larger number—can take two without risk of injury. Three should be taken only in exceptional cases. Indeed, the arrangement of the daily exercises of the school seldom admits of this number. The same wisdom that determines the department that the pupil is to enter, should guide the pupil in the choice of his studies. It should under no circumstances be left to the will or wishes of the pupil.

This adjustment of the work renders the machinery of the school more flexible, and makes it easier to adapt it to

the various physical and mental conditions of the pupils. The required and alternative studies secure thorough mental training. The optional studies, while accomplishing the same general object, have the additional advantage of being especially suited to the tastes, aptitudes, and purposes of the individual pupil. They give to the curriculum a larger scope, and impart to it the essential element of flexibility. This element of choice is an important factor in the educational problem, in that it tends to attract and interest those who would otherwise fail through indifference or indolence. It recognizes the principle, universal in its application, that one's best efforts are always in the direction in which he is most interested. Its advantages may be briefly stated as follows:—

1. It meets the wants of individual pupils by furnishing the mental nutrition best suited to their varied tastes, aptitudes and purposes.

2. It secures better work from the pupils by recognizing the principle that an interest in one's work is essential to its most vigorous and successful prosecution.

3. It secures better work from the teachers by bringing them more in accord with their pupils, and thus vitalizing energies heretofore wasted.

4. It improves the moral tone of the pupils by substituting freedom for compulsion, and thus enlarging his responsibilities. "The test of high character is the amount of freedom it will absorb without going to pieces. The elective system enlarges the capacity to absorb freedom undisturbed."

I believe that this feature of the revised curriculum will prove to be an element of strength to the school, and I would especially urge a generous infusion of the spirit upon which it is based. "The letter killeth, it is the spirit that giveth life."

GENERAL CONDITION OF THE SCHOOLS.

The work of our schools during the past year is a record of steady and substantial progress. Public interest in all that pertains to their highest welfare is unabated; the number of pupils in attendance is greater than ever before; the teachers are earnest, faithful, and for the most part, efficient; the standard of scholarship is an incentive to reasonable endeavor; and their general tone and spirit are, on the whole, gratifying and encouraging.

The present condition of our schools gives promise of a more extended influence in the future and should incite to renewed efforts for their improvement. They need today, more than all things else, the stimulus that can come only from improved methods of instruction. They need a comprehensive and thorough system of physical training. There is need that the work of the school shall be more distinctively a preparation for the proper discharge of the duties of citizenship. There is need, too, of a fuller recognition of the importance of a thorough training of character as the foundation of instruction. When these needs are supplied our schools will be better prepared to attain to the full measure of their efficiency and usefulness.

In conclusion I desire to acknowledge the cheerful cooperation of the teachers and their earnest efforts in behalf of the schools entrusted to their care.

I also wish to tender my sincere thanks to the members of the Board who have given me so large a measure of their confidence, and whose generous sympathy and support have aided me in the discharge of the delicate and responsible duties of my office.

Respectfully submitted,
 THOMAS EMERSON,
Superintendent.

January 5, 1887.

APPENDIX.

STATISTICS IN DETAIL.

TABLE 1.—Number of Persons in the City Between Five and Fifteen Years of Age, May 1, 1881-6, by Wards.

WARDS.	1881.	1882.	1883.	1884.	1885.	1886.	Increase.	Decrease.
I.	453	463	512	541	527	545	18	. .
II.	603	645	699	705	705	717	12	. .
III.	449	506	519	543	531	594	63	. .
IV.	523	562	554	567	593	602	9	. .
V.	436	470	460	464	423	480	57	. .
VI.	494	549	558	559	560	559	. .	1
VII.	294	263	262	274	272	288	16	. .
Total	3,252	3,458	3,564	3,653	3,611	3,785	175	1

TABLE II.—Number of Rooms, Halls, Sittings, Pupils, Teachers, Number of Pupils to a Teacher, Number of Pupils over 15 Years of Age, and Number under 5 years of Age, in Each School, May 1, 1886.

Schools.	Rooms. (occupied.)	Rooms. (unoccu- pied.)	Halls.	Sittings.	Number of pupils.	Number of teachers.	Number of pupils to a teacher.	Number of pupils over 15 years of age.	Number of pupils un- der 5 years of age.
High.....	*6	..	..	430	396	**10	39.6	368	..
Mason.....	7	1	1	318	257	7	36.9	32	..
Rice.....	4	..	..	202	161	4	40.3	..	..
Oak Hill.....	1	1	..	42	27	1	27.	..	..
Thompsonville....	1	..	..	40	32	1	32.	..	..
Hyde.....	6	..	..	266	217	6	36.2	10	4
Prospect.....	6	2	1	274	216	6	36.	4	..
Hamilton.....	4	..	1	163	115	4	28.8	4	..
Williams.....	8	..	..	370	301	8	37.7	14	..
Pierce.....	4	..	1	194	165	4	41.2	47	..
Davis.....	4	..	..	220	193	4	48.2	..	..
Franklin.....	4	..	..	208	188	4	47.	..	1
Barnard.....	3	1	..	147	115	3	38.3	..	..
Clafin.....	5	1	..	199	184	5	36.8	15	..
Adams.....	5	..	..	272	227	6	37.8	16	..
Eliot.....	4	..	..	196	142	4	35.5	16	..
Jackson.....	5	1	..	249	225	5	45.	..	..
Bigelow.....	8	..	1	382	306	8	38.3	37	..
Underwood.....	4	..	..	240	173	4	43.3	..	..
Lincoln.....	1	1	..	131	48	1	48.	..	4
Total.....	90	8	5	4,543	3,608	95	38.5	563	9

* Also four recitation rooms, one laboratory, and one art room. ** Also three special teachers.

TABLE III.—Semi-Quarterly Attendance, Etc., by Schools, for the Year Ending July 2, 1886.

SCHOOLS.	I.					II.					III.					IV.				
	Average Whole Number.	Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Corporal Punishment.	Average Whole Number.	Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Corporal Punishment.	Average Whole Number.	Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Corporal Punishment.	Average Whole Number.	Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Corporal Punishment.
High	419.5	402.	95.9	96	0	416.2	393.6	94.6	156	0	405.7	366.5	90.3	164	0	402.2	359.3	89.3	269	0
Mason	260.9	245.6	94.3	54	0	270.1	252.9	93.5	52	1	271.8	248.9	91.5	61	0	271.4	247.2	91.	127	1
Rice	146.6	137.4	93.4	32	0	146.6	134.3	91.9	36	0	150.6	133.5	88.8	44	0	154.1	126.	82.5	64	0
Oak Hill	25.4	24.6	96.9	1	0	24.7	23.3	94.	2	2	24.5	22.6	92.	6	0	23.2	19.8	85.	6	0
Thompsonville	35.3	32.	90.6	6	2	34.9	31.9	91.4	5	1	31.4	28.4	90.4	5	0	30.2	26.	86.	5	0
Hyde	204.9	187.9	93.2	27	0	200.6	182.8	91.7	42	1	197.5	178.2	90.7	36	3	185.2	162.1	88.1	35	0
Prospect	214.	206.7	96.4	15	2	216.5	206.7	95.6	29	0	213.8	200.1	93.4	40	2	203.3	185.5	90.7	27	3
Hamilton	116.6	113.1	97.1	7	0	117.2	112.6	96.1	10	4	113.2	107.8	95.2	5	1	111.4	104.4	93.4	7	2
Williams	288.	270.4	94.	39	2	290.	268.	92.5	40	2	297.6	269.5	90.8	34	1	293.2	264.2	90.3	50	13
Pierce	168.2	165.5	98.5	1	2	168.8	163.8	96.9	4	3	164.2	157.2	95.8	3	0	164.8	158.4	95.8	2	0
Davis	164.5	160.3	97.5	15	0	167.5	161.1	96.2	12	0	161.6	154.8.	93.8	10	0	168.6	155.7	92.4	6	0
Franklin	182.8	175.4	96.1	1	1	180.6	172.2	95.7	10	2	174.4	163.7	93.6	12	5	171.4	158.8	92.5	9	1
Barnard	100.5	97.1	96.4	8	0	108.1	101.3	93.6	6	0	104.4	96.7	92.6	10	0	103.9	91.6	90.2	11	1
Clafin	172.7	163.3	94.5	19	0	179.8	170.	94.5	23	0	178.5	165.1	92.	9	0	174.1	158.7	91.	19	0
Adams	216.3	206.7	95.5	6	2	223.8	212.2	94.8	11	1	218.	203.6	92.6	7	2	215.6	196.9	91.2	16	1
Eliot	154.3	138.9	90.1	22	0	146.6	130.6	89.4	14	0	143.1	129.3	90.4	22	0	139.8	122.3	87.8	17	0
Jackson	197.8	181.8	91.8	18	3	196.9	176.7	89.5	17	4	187.6	166.9	88.7	17	2	187.5	158.4	83.8	23	0
Bigelow	309.3	298.	96.1	63	0	312.7	296.8	94.7	72	0	310.	286.	92.1	79	0	304.6	279.	91.6	143	0
Underwood	164.5	155.6	94.5	39	0	166.9	155.4	93.1	39	0	169.1	151.	89.9	56	0	164.3	141.7	86.8	95	0
Lincoln	29.3	28.2	96.2	27	0	31.7	30.	94.6	8	0	32.6	31.1	95.1	29	0	32.2	28.9	89.7	25	0

TABLE III—(Concluded).—Semi-Quarterly Attendance, Etc., by Schools, for the Year Ending July 2, 1886.

SCHOOLS.	V.					VI.					VII.					VIII.				
	Average Number.	Average Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Punishment.	Average Number.	Average Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Punishment.	Average Number.	Average Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Punishment.	Average Number.	Average Attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Punishment.
High.	400.7	362.4	90.5	253	0	394.6	357.4	90.6	286	0	385.5	348.7	90.5	231	0	363.3	309.4	85.2	223	0
Mason.	271.1	241.2	89.	51	0	264.3	233.3	88.3	49	0	251.4	221.8	87.9	46	1	228.1	207.1	90.6	44	0
Rice.	151.6	125.2	82.6	19	0	156.4	137.3	87.2	19	0	156.7	135.7	86.8	38	0	149.4	130.8	87.7	33	0
Oak Hill.	23.8	20.5	86.	0	0	22.7	18.9	83.3	2	0	25.8	23.5	91.	5	0	25.3	21.8	87.	1	1
Thompsonville.	29.	24.6	84.8	4	1	30.	26.3	87.6	7	1	30.4	27.2	89.6	8	0	30.1	27.	89.8	8	0
Hyde.	188.7	166.9	88.6	25	3	19.4	170.8	89.1	29	1	212.1	186.6	88.6	49	2	198.8	180.6	91.1	53	5
Prospect.	199.2	187.4	94.1	17	0	209.5	197.2	94.4	28	1	208.3	195.6	94.3	24	4	198.9	190.8	96.2	15	0
Hamilton.	107.6	101.1	93.8	8	1	109.5	103.3	94.6	3	0	111.5	106.3	95.2	18	1	109.9	105.1	95.6	22	1
Williams.	288.5	257.8	89.8	31	5	306.5	262.1	85.5	27	2	289.1	261.9	90.6	49	1	270.7	250.5	92.5	35	1
Pierce.	166.	160.4	96.6	4	1	165.2	154.6	93.1	2	0	156.4	149.9	96.	3	1	147.2	142.6	96.8	4	1
Davis.	168.6	158.9	94.2	10	2	165.5	152.3	91.7	9	0	167.7	158.7	94.5	13	1	163.2	156.2	95.6	13	0
Franklin.	167.	154.1	92.	1	2	172.	158.6	92.3	10	3	183.1	170.	93.	9	3	181.8	171.9	94.7	5	0
Barnard.	106.5	98.8	92.7	5	0	107.4	98.2	91.4	9	1	112.8	105.1	92.8	8	0	106.7	99.	92.5	5	0
Clafin.	173.5	154.8	88.3	14	0	174.	160.3	92.	9	0	184.2	168.8	91.6	20	0	176.6	164.	92.6	13	2
Adams.	214.8	197.7	92.1	12	2	219.7	199.7	91.	10	0	225.6	212.4	93.7	10	0	215.8	203.3	94.4	25	1
Eliot.	139.5	124.3	89.6	29	0	141.9	119.1	84.8	15	0	134.	115.1	86.3	23	0	128.9	117.4	91.4	6	0
Jackson.	188.7	164.	86.6	18	0	197.	173.5	87.7	18	0	216.2	192.9	89.1	16	0	209.4	188.2	89.9	16	0
Bigelow.	305.8	287.6	93.9	48	0	304.2	283.4	92.9	58	0	301.6	286.3	94.6	29	0	290.3	279.8	96.1	48	0
Underwood.	164.9	147.4	89.1	34	0	162.8	148.3	89.1	18	0	161.3	156.	93.3	38	0	161.3	147.1	89.9	16	0
Lincoln.	32.2	29.5	91.9	9	0	39.2	35.6	90.8	3	0	46.8	42.	89.8	12	0	45.4	42.1	92.7	5	0

TABLE IV.

Total Enrolment, etc., by Schools, for the year ending July 2, 1886.

SCHOOLS.	Whole Number of Pupils enrolled.	Average Whole Number.	Average attendance.	Percentage of Attendance.	Cases of Tardiness.	Cases of Corporal Punishment.
High.....	431	398.9	362.4	90.9	1688	0
Mason.....	287	261.1	237.3	90.8	484	3
Rice.....	182	151.5	132.5	87.6	285	0
Oak Hill.....	30	24.4	21.8	89.4	23	3
Thompsonville.....	44	31.4	27.9	88.8	48	5
Hyde.....	237	198.3	176.9	90.1	295	15
Prospect.....	251	207.9	196.2	94.4	195	12
Hamilton.....	137	112.1	106.7	95.1	80	13
Williams.....	332	290.4	263.1	90.7	305	27
Pierce.....	182	162.6	155.3	96.4	23	8
Davis.....	196	166.2	157.2	94.5	88	3
Franklin.....	210	176.6	165.6	93.7	57	17
Barnard.....	120	106.2	98.4	92.8	62	2
Claffin.....	201	176.7	163.1	92.1	126	2
Adams.....	252	218.7	204.1	93.2	97	9
Eliot.....	163	141.0	124.6	88.7	148	0
Jackson.....	272	197.6	175.3	88.4	143	9
Bigelow.....	345	304.8	287.1	94.0	540	0
Underwood.....	183	165.1	149.9	90.7	335	0
Lincoln.....	51	36.2	33.4	92.6	83	1
Total.....	4106	3527.7	3238.8	91.8	5105	129

TABLE V.—(Concluded.) Number of Pupils and their Average Age by Grades and Classes, in September, 1885.

SCHOOLS.	GRADES.—(Concluded.)						CLASSES.						Total No. of Pupils.					
	VII.		VIII.		IX.		IV.		III.		II.			I.				
	Av. Age		Av. Age		Av. Age		Av. Age		Av. Age		Av. Age			Av. Age				
	Years.	Months	Years.	Months	Years.	Months	Years.	Months	Years.	Months	Years.	Months		Years.	Months			
	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.	No. of Pupils.		No. of Pupils.	No. of Pupils.			
High.....	—	9	—	9	—	33	14	—	15	4	131	16	1	1	61	18	1	424
Mason.....	44	12	—	13	—	9	—	—	—	—	—	—	—	—	—	—	—	274
Rice.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152
Oak Hill.....	2	11	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26
Thompsonville..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40
Hyde.....	18	12	6	16	13	6	4	14	10	—	—	—	—	—	—	—	—	210
Prospect.....	21	12	4	18	12	8	10	14	—	—	—	—	—	—	—	—	—	227
Hamilton.....	8	12	8	6	13	9	6	14	3	—	—	—	—	—	—	—	—	119
Williams.....	17	13	3	14	13	10	18	14	10	—	—	—	—	—	—	—	—	303
Pierce.....	48	12	6	70	13	10	10	14	8	—	—	—	—	—	—	—	—	171
Davis.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	174
Franklin.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186
Banard.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	114
Claffin.....	20	13	3	6	13	7	17	14	5	—	—	—	—	—	—	—	—	183
Adams.....	13	13	4	22	14	2	12	14	11	—	—	—	—	—	—	—	—	225
Eliot.....	18	13	8	8	13	10	16	14	4	—	—	—	—	—	—	—	—	155
Jackson.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	208
Bigelow.....	47	13	8	51	13	5	14	15	6	—	—	—	—	—	—	—	—	316
Underwood.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	173
Lincoln.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	80
Total.....	256	12	10	243	13	7	140	14	6	140	15	4	131	1	92	17	18	3710

TABLE VI.—Annual Enrolment in Each Grade and Class, in September, 1880-1885.

DATE.	GRADES.								CLASSES.				Total.	
	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	IV.	III.	II.		I.
September, 1880..	464	372	376	321	296	342	260	221	162	104	97	60	43	3118
September, 1881..	530	386	381	394	270	312	311	211	150	114	58	77	37	3231
September, 1882..	510	436	405	853	403	237	266	225	180	104	92	51	49	3311
September, 1883..	514	454	436	398	369	298	210	183	166	125	78	70	40	3341
September, 1884..	605	467	436	412	411	315	260	185	165	145	113	77	54	3645
September, 1885..	590	425	425	469	401	337	256	243	140	140	131	92	61	3703

TABLE VII.—Percentage of the Total Annual Enrolment in each Grade and Class, in September 1880-1885.

DATES.	GRADES.								CLASSES.				Total.	
	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	IV.	III.	II.		I.
September, 1880.....	14.9	11.9	12.1	10.3	9.5	11.0	8.3	7.1	5.2	3.3	3.1	1.9	1.4	100
September, 1881.....	16.4	11.9	11.8	12.2	8.4	9.7	9.6	6.5	4.6	3.6	1.8	2.4	1.1	100
September, 1882.....	15.4	13.2	12.2	10.7	12.2	7.2	8.0	6.8	5.4	3.1	2.8	1.5	1.5	100
September, 1883.....	15.7	13.6	13.1	11.9	11.0	8.8	6.3	5.2	5.0	3.7	2.4	2.1	1.2	100
September, 1884.....	16.6	12.8	12.0	11.3	11.3	8.6	7.1	5.1	4.5	4.0	3.1	2.1	1.5	100
September, 1885.....	15.9	11.5	11.5	12.6	10.8	9.0	6.9	6.6	3.8	3.8	3.5	2.5	1.6	100

TABLE VIII.—Distribution of Pupils in High School by Classes and Courses of Studies.

CLASS.	GENERAL.		CLASSICAL.		MERCANTILE.		SPECIAL.		TOTAL.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
I.....	8	30	10	3	2	0	2	7	62
II.....	14	37	15	8	12	0	1	8	95
III.....	37	55	20	11	3	1	1	3	131
IV.....	39	50	30	12	7	2	0	3	143
Total.....	98	172	75	34	24	3	4	21	431

ROLL OF TEACHERS.

HIGH SCHOOL.

HEAD MASTER.

EDWARD H. CUTLER, Washington Street, Newton.

MASTER.

EZRA W. SAMPSON, Washington Street, Newtonville.

ASSISTANT MASTER.

S. WARREN DAVIS, River Street, West Newton.

ASSISTANTS.

CAROLINE SPEAR, Walnut Park, Newton.

S. ALICE WORCESTER, Highland Avenue, Newtonville.

M. ABBY SMITH, Cabot Street, Newtonville.

MAYBELL P. DAVIS, Walnut Street, Newtonville.

EVELYN RICH, Walnut Street, Newtonville.

S. ALICE RANLETT, Central Street, Auburndale.

MRS. LIDA P. UNDERHILL, Washington Street, Newtonville.

SPECIAL TEACHERS.

Military Drill.

J. P. B. FISKE, Cor. Wolcott and Lexington Streets, Auburndale.

Calisthenics and Elocution.

JENNIE E. IRESON, No. 185 West Canton Street, Boston.

Drawing and Writing.

ADELINE V. POND, Lexington Street, Auburndale.

DISTRICTS.

NEWTON CENTRE.

N. B.—Roman numerals indicate grade. I-III, Primary ; IV-IX, Grammar.

MASON SCHOOL.

MASTER.

ALBERT L. HARWOOD, IX, Beacon Street, Newton Centre.

FIRST ASSISTANT.

ELLEN S. BAKER, VIII, Station Street, Newton Centre.

ASSISTANTS.

ABBY D. ESTY, VII,	Knowles Street, Newton Centre.
MARIA F. WOOD, VI,	Homer Street, Newton Centre.
MARY TENNEY, V,	No. 378 Tremont Street, Boston.
ROBERTA J. HARDIE, IV, V,	Central Avenue, Needham.
MARY E. MASON, IV,	Sumner Street, Newton Centre.

RICE SCHOOL.

PRINCIPAL.

MYRA A. WILSON, III, Sumner Street, Newton Centre.

ASSISTANTS.

MARGARET MARTIN, II,	Centre Street, Newton Centre.
ELLEN M. COOK, I,	Pelham Street, Newton Centre.
IDA A. MERRILL, I,	Homer Street, Newton Centre.

OAK HILL SCHOOL.

PRINCIPAL.

LOUISE N. BURBANK, I, III, V, VI, VII, Oak Hill.

THOMPSONVILLE SCHOOL.

PRINCIPAL.

HELEN A. DAVIS, I, II, Beacon Street, Newton Centre.

UPPER FALLS.

HYDE SCHOOL.

MASTER.

GEORGE A. MOORE, VIII, IX, Floral Avenue, Newton Highlands.

FIRST ASSISTANT.

CHARLOTTE E. CAMERON, VI, VII,
Lincoln Street, Newton Highlands.

ASSISTANTS.

BLANCHE G. WETHERBEE, V, Bowdoin Street, Newton Highlands.
 GERTRUDE BLACKMAR, IV, No. 70 Commonwealth Avenue, Boston.
 N. GRACE GOULD, II, III, No. 29 Union Park, Boston.
 PHEBE E. CHURCHILL, I, Centre Street, Newton Highlands.

PROSPECT SCHOOL.

MASTER.

CHARLES E. HUSSEY, VIII, IX, High Street, Newton Upper Falls.

FIRST ASSISTANT.

MARTHA L. PERKINS, VI, VII,
 Rockland Place, Newton Upper Falls.

ASSISTANTS.

ELLA F. CROOKER, V, I Street, South Boston.
 LUCY A. HAYWARD, IV, High Street, Newton Upper Falls.
 LIZZIE W. EVERETT, II, III, High Street, Newton Upper Falls.
 MRS. MARY P. FANNING, I, II,
 Cor. Spring and Summer Streets, Newton Upper Falls.

LOWER FALLS.

HAMILTON SCHOOL.

MASTER.

LUTHER E. LELAND, }
 MRS. ELLEN M. LELAND, } V, VI, VII, VIII, IX,
 Cor. Washington and Beacon Streets, Newton Lower Falls.

FIRST ASSISTANT.

ANNA G. SWAIN, III, IV, Grove Street, Newton Lower Falls.

ASSISTANT.

SARAH H. JUMPER, I, II, Grove Street, Newton Lower Falls.

AUBURNDALE.

WILLIAMS SCHOOL.

MASTER.

GEORGE L. CHANDLER, VIII, IX, Auburn Street, Auburndale.

FIRST ASSISTANT.

ELIZABETH A. PINNOCK, VI, VII, Walnut Street, Newtonville.

ASSISTANTS.

BELL M. HALL, V,	Auburn Street, Auburndale.
LAURA SALTONSTALL, IV,	Centre Street, Newton.
DORA A. ALLEN, III,	Washington Street, West Newton.
HATTIE A. INGRAHAM, II,	West Central Street, Natick.
ANN B. SMITH, I,	South Main Street, Natick.

WEST NEWTON.

PIERCE SCHOOL.

MASTER.

LEVI F. WARREN, VIII, IX, Otis Street, West Newton.

FIRST ASSISTANT.

MRS. SARAH A. WARREN, VIII, Otis Street, West Newton.

ASSISTANTS.

M. ALICE WARREN, VII,	Otis Street, West Newton.
ELIZA E. SIMMONS, VI,	Henshaw Street, West Newton.

Davis School.

PRINCIPAL.

ELLA G. BATES, IV, V, Chestnut Street, West Newton.

ASSISTANTS.

HELEN S. TOLMAN, III, IV,	Washington Street, West Newton.
ADDIE A. JACKSON, II,	Elm Street, West Newton.
SARAH E. FOSETR, I,	Elm Street, West Newton.

Franklin School.

PRINCIPAL.

ELIZABETH F. PADDOCK, V, VI, River Street, West Newton.

ASSISTANTS.

LULU M. BAGLEY, IV,	Auburndale Avenue, West Newton.
CLARA H. THOMPSON, II, III,	Warren Avenue, West Newton.
MARGARET A. MAGUE, I,	Auburndale Avenue, West Newton.

Shaw Street School.

PRINCIPAL.

CALISTA S. WOOD, IV, V, Highland Street, West Fewton.

ASISTANTS.

SUSAN E. COPELAND, II, III, Highland Street, West Newton.
 MRS. LIZZIE F. JONES, I, II, Lake Street, Waltham.

 NEWTONVILLE.

Claffin School.

MASTER.

HERBERT F. SYLVESTER, VIII, IX, Bowers Street, Newtonville.

FIRST ASSISTANT.

CARRIE H. RUGG, VI, VII, Sumner Street, Newton Centre.

ASSISTANTS.

ELLEN M. HARRIGAN, IV, V, Washington Street, Newtonville.
 ELLEN S. TEWKSBURY, II, III, Walnut Street, Newtonville.
 LYDIA A. BRIERLEY, I, II, Grove Street, Newton Lower Falls.

 Adams School.

MASTER.

WILLIAM A. SPINNEY, VIII, IX, Webster Street, West Newton.

FIRST ASSISTANT.

V. E. HAPGOOD, VI, VII, Prescott Street, Newtonville.

ASSISTANTS.

ABBIE I. FISKE, IV, V, Prescott Street, Newtonville.
 ESTELLA M. HAYNES, III, IV, No. 353 Columbus Avenue, Boston.
 CLARA M. FOX, I, II, Kilby Street, Woburn.
 ANGELIA A. SMITH, I, Prescott Street, Newtonville.

 Eliot School.

MASTER.

GEORGE G. EDWARDS, VIII, IX, Prescott Street, Newtonville.

FIRST ASSISTANT.

H. AUGUSTA MILLARD, VI, VII, Lowell Street, Newtonville.

ASSISTANTS.

MRS. LOUISE W. CLELLAND, V, Watertown Street, Watertown.
 ELLEN B. PRIME, IV, Maple Place, Newton.

Jackson School.

PRINCIPAL.

ELIZA J. LOVELY, III, Gardner Street, Newton.

ASSISTANTS.

MARY A. WELLINGTON, II, Webster Street, West Newton.
 ROSE A. HARKINS, II, Washington Street, Newton.
 GERTRUDE G. TEWKSBURY, I, Walnut Street, Newtonville.
 LOTTIE E. STEARNS, I, Watertown Street, Nonantum.

NEWTON.

Bigelow School.

MASTER.

H. CHAPIN SAWIN, IX, Maple Place, Newton.

FIRST ASSISTANT.

MRS. M. M. BAKEMAN, VIII, No. 28 Upton Street, Boston.

ASSISTANTS.

ANNIE E. GEORGE, VII, Maple Place, Newton.
 S. LOUISE SHELTON, VI, Bennington Street, Newton.
 AUGUSTA A. LENTELL, VI, Washington Street, Newton.
 EMILY J. DYER, V, Newtonville Avenue, Newton.
 MARY R. PUTNEY, IV, V, Maple Place, Newton.
 ELIZABETH AYLES, IV, Webster Street, West Newton.

Underwood School.

PRINCIPAL.

CHARLOTTE E. SEWALL, III, Myrtle Street, Winchester.

ASSISTANTS.

ADA L. DONKIN, III, Brook Street, Newton.
 ANNIE L. WOOD, II, Wesley Street, Newton.
 JOSEPHINE W. LITTLEFIELD, I, Richardson Street, Newton.

Lincoln School.

PRINCIPAL.

MRS. NELLIE B. RAND, I, II, Mount Vernon Street, West Newton.

SPECIAL TEACHERS.

Music.

HORACE M. WALTON,

Austin Street, Newtonville.

Sewing.

JULIA GRANT,

Washington Street, Newton.

MRS. ELLEN L. BOND,

Paul Street, Newton Centre.

INDEX.

	Page.
ORGANIZATION	3-5
GENERAL REPORT OF THE SCHOOL COMMITTEE	9-22
HIGH SCHOOL	13-17
Graduates	17
SECRETARY'S REPORT	23-24
SUPERINTENDENT'S REPORT	25-68
Statistics	59-68
ROLL OF TEACHERS	69-75

CITY OF NEWTON.

ANNUAL REPORT

— OF —

THE TRUSTEES

— OF THE —

NEWTON FREE LIBRARY

For the Year Ending Dec. 31, 1886.



NEWTON:
PRESS OF THE NEWTON JOURNAL.

1887.

BOARD OF TRUSTEES, 1886.

At Large.

JOHN S. FARLOW	
WILLIAM CLAFLIN	
A. LAWRENCE EDMANDS	TERM EXPIRES 1887.
JULIUS L. CLARKE	TERM EXPIRES 1888.
BRADFORD K. PEIRCE	TERM EXPIRES 1889.

From the Board of Aldermen.

GEORGE M. FISKE	TERM EXPIRES 1887.
---------------------------	--------------------

From the Board of Common Council.

ELLIS W. REDPATH	TERM EXPIRES 1887.
----------------------------	--------------------

BOARD OF TRUSTEES, 1887.

At Large.

JOHN S. FARLOW	
WILLIAM CLAFLIN	
A. LAWRENCE EDMANDS	
JULIUS L. CLARKE	TERM EXPIRES 1888.
BRADFORD K. PEIRCE	TERM EXPIRES 1889.

From the Board of Aldermen.

GEORGE PETTEE	TERM EXPIRES 1887.
-------------------------	--------------------

From the Board of Common Council.

WARREN P. TYLER	TERM EXPIRES 1887.
---------------------------	--------------------

ORGANIZATION FOR THE YEAR 1886.

President.

JOHN S. FARLOW.

Secretary.

JULIUS L. CLARKE.

Committee on Library.

PRESIDENT, *ex officio*,
BRADFORD K. PEIRCE.

WILLIAM CLAFLIN.
JULIUS L. CLARKE.

Committee on Building.

PRESIDENT, *ex officio*,
A. LAWRENCE EDMANDS.

ELLIS W. REDPATH.
GEORGE M. FISKE.

Superintendent.

BRADFORD K. PEIRCE.

Librarian.

HANNAH P. JAMES.

Assistant Librarians.

ELIZABETH P. THURSTON.
ETTA P. CLEAVELAND.

LOUISE J. SMALLWOOD.
MILLIE E. MICHAELS.
CHARLOTTE A. FLANDERS.

Janitor.

JAMES J. TOWER.

ORGANIZATION FOR THE YEAR 1887.

President.

JOHN S. FARLOW.

Secretary.

JULIUS L. CLARKE.

Committee on Library.

PRESIDENT, *ex officio*,

BRADFORD K. PEIRCE.

WILLIAM CLAFLIN.

JULIUS L. CLARKE.

Committee on Building.

PRESIDENT, *ex officio*,

A. LAWRENCE EDMANDS.

WARREN P. TYLER.

GEORGE PETTEE.

Superintendent.

BRADFORD K. PEIRCE.

Librarian.

HANNAH P. JAMES.

Assistant Librarians.

ELIZABETH P. THURSTON.

LOUISE J. SMALLWOOD.

ETTA P. CLEAVELAND.

CHARLOTTE A. FLANDERS.

Janitor.

JAMES J. TOWER.

TRUSTEES' REPORT.

*To His Honor the Mayor, and the City Council of Newton,
Mass:—*

For the details of the operation of the Newton Free Library for the year ending December 31st, 1886, the Trustees ask reference to the report of the Superintendent, herewith submitted, and commend it to the careful consideration of all interested in educational movements as a most instructive document.

Table A, in the appendix to Superintendent's report, shows the receipts of the past year to have been, from appropriations made by the City Council,	\$8,500 00
Balance from last year	1 53
From fines, etc.,	426 63

A total of	\$8,928 16
The expenditures for the same period, . . .	8,926 91
Leaving a balance at the close of the year of	\$ 1 25

In addition to this, there has been expended from the income derived from the "Jewett Art Fund," .	\$183 86
From the "Alden Speare Fund,"	58 87
And from the "Read Fund,"	399 71

Making a total of	\$642 44
-------------------	----------

The Trustees acknowledge with gratitude the appropriation made for the enlargement of the library by the City

Council last year. Work thereon has progressed satisfactorily, and we confidently expect its completion within the next four months, when we hope to present to our citizens a library as complete in all its appointments as any in the State outside of Boston.

Respectfully submitted by the Board of Trustees,
JOHN S. FARLOW, President.

SUPERINTENDENT'S REPORT.

To the Board of Trustees of the Newton Free Library:—

GENTLEMEN:—We closed our report last year with the expression of a hope that the addition to the accommodations of the library, so much needed, would not be long delayed. We are happy to open this report with the much desired annex rapidly approaching completion. Our space in Edmands' Hall had become uncomfortably narrow for the book-stalls already erected, for the reference tables, and for the increasing number of patrons daily visiting the library to secure an exchange of books, or to consult volumes in the art and reference departments.

The latter use of the library has become a very important feature of it. The number of literary, scientific and art clubs in the city, and the local and national courses of reading and study which have been instituted of late, have taxed the contents of our library shelves, and much more our limited spaces for the consultation of books. There is only one feature of our library work more interesting than this, and that is its fruitful connection with the public school system, and the arrangements, now pretty well perfected, for providing for teachers and pupils works for the illustration and supplementing of the daily lessons. The demand for opportunities for consulting a large number of volumes in developing a special subject is adding greatly both to the use

and profit of the library to our citizens. The character of the reading in the community is rapidly changing, and is becoming more and more substantial and improving. Instead of taking on the character of a circulating library, supplying simply the lightest forms of literature for the passing away of time, or to meet a morbid appetite for sensational fiction, the library is becoming a prominent and efficient public educational institution, purifying and elevating the taste of the community. This has been brought about, not by refusing to secure the best of the works of the imagination of the day, and in abundant quantities, but because the improving taste of our patrons, and a freshly awakened interest in an instructive literature, has demanded a higher standard of intellectual food. In part, this is to be attributed to the very rich additions now constantly made in the departments of history, biography, science, travel and art. It requires no more time to read a volume that will add to our permanent resources for enjoyment and usefulness, than an evanescent work that simply moves the emotions and dies out of the memory when it is laid down. Especially is one disposed to think of this when these works in the higher departments of literature in our days, are invested with all the fascination of fiction, as many of them are. In no year has the list of such books, coming constantly from the press, been larger or more attractive than during the period just closed.

The large provision made for the schools, while it has diminished somewhat the amount of money devoted to our general fund for additions to our shelves, has accomplished, thus early in a very successful experiment, a number of good results. It has awakened fresh interest on the part of the teachers in their own intellectual improvement and special preparation for their classes. It has quickened the minds of the pupils in their studies and created a taste for

reading. Besides these excellent influences, it has greatly interested the families with which these children are connected, both in the books they were reading and also in the larger varieties of the library itself. To this latter result, in no small degree, do we attribute the very considerable increase in the monthly and aggregate circulation for the year, of our books. But comparatively a small portion of our school children pass in their studies farther than the High School; the larger number leaving their books after having advanced through the classes of the grammar school. Unless a habit of improving reading has been previously established, little farther intellectual development will be secured. If, however, they have learned to appreciate the advantages offered by the Free Library, their education will still be continued whatever may be the active employment of their lives. This will go far towards bridging over the chasm between school and business life, and secure a constant inspiration to the higher cultivation of the mind.

We have sought to afford the outlying wards of the city every facility for securing books from the library daily, in our power. In one or two instances during the past year, we have opened new districts of the city, and arranged for their convenience in the exchange of volumes. There are certain plans now in progress of development for bestowing larger facilities upon some portions of the city where some embarrassment has heretofore existed, and we trust during the coming season to remove every occasion for a reasonable complaint. Every day, pleasant or stormy, our faithful messenger gathers and distributes throughout the city the books selected from the library or returned to its shelves. We have obtained every work that has been specially called for, and in instances where a book has awakened a marked interest, we have sought to multiply copies to meet at an early day the wide demand.

The City Council appropriated last year the full sum asked for by the Trustees for the expenses of administration, and for additions to the library shelves, \$8,500. With the additional income of the permanent funds bestowed by generous citizens, and the gifts of books, we have been enabled to add 1,895 new works to our catalogue. Books to the amount of 120 have been worn out in service, or have been removed from the shelves or lost, making a net gain to our catalogue of 1,775 volumes. These books are distributed among the following departments:—

Juvenile Reading and Prose Fiction,	294
Essays and Poetry,	257
Bound Periodicals,	92
Foreign Literature,	50
Geography and Travels,	165
Biography,	136
History,	148
Natural Science and Industrial Arts,	215
Political and Social Science,	111
Theology,	66
Reference Library,	241
	<hr/>
	1,775

During the year, the circulation of books for home use has reached the large amount of 90,213 volumes, which, in view of our population and the distance of some portions of the city from the library, is a remarkable fact. The increase for the year over the previous one in our circulation has been 6,275, and this increase has been fairly divided among all the wards of the city. There are now in the library 25,084 volumes—about ten thousand more than when the library became a city institution. It was open 306 days during last year. Its largest daily circulation was 636 volumes;

its smallest, 164. In addition to this, nearly every day many persons have been present at the reference tables for purposes of investigation, the examination of works upon art, or for study. Since the new registry was commenced in 1885, 5,237 persons have taken out new cards upon which to secure books.

The one great event of the year is the generous appropriation of over \$20,000 by the city for the enlargement of the accommodations of the library building. The addition provides more than an equal amount of room to that furnished by the original building. It has been planned with much skill, after a long consideration of the special necessities of the institution. It will afford a spacious well lighted room for the cases of books, and open a much needed space in Edmands' Hall for the daily patrons. It will also give a very neat and convenient room for visitors desiring to use the reference library. An additional room will be secured in the new wing for the use of school work, permitting the librarian to afford such assistance and suggestion to classes that may visit the library, as will be of great service to them. A beautiful, ample, and well-ventilated reading room—a convenience greatly needed by the increasing number of patrons of this department—will be provided, and every requisite opportunity for the natural growth of the library for many years to come will be found in these enlarged quarters. It is expected that the work will be completed and the books arranged upon the new plan early in the summer, if not during the coming spring. We shall then have as convenient and well-appointed a library as any city of the same population in the commonwealth. There will be spaces upon the new walls, which we have hitherto lacked, where we shall be very happy to hang, for the enjoyment and improvement of our patrons, any paintings that our citizens, following the

generous precedents already established, may feel disposed to add to our works of art. As we shall now have larger conveniences for the disposition of books, we shall also be grateful for such donations as may be made from private libraries to the public collection. At this time, as a great boon to young students resident in our city, and for the benefit of the profession generally, we shall specially welcome any gifts towards the formation of a working law library. Such a bequest, if any citizen should be pleased to make his library a permanent blessing after he has ceased to use it, would add another important facility to our means of meeting the public requirements in a free library.

We have spoken heretofore of the American Library Association and its annual meetings. It is one of the very significant signs of the times. It shows both the increasing interest taken in these institutions throughout the country, the rapid increase in their number, the high character and intelligence of those having them in charge, and the careful consideration given to everything that concerns their usefulness and improvement. Last year the annual meeting was held in the city of Milwaukee, Wis. About one hundred and fifty of the officers and supervisors of libraries from all portions of the country, were present. The papers read during the week of the Congress, were eminently practical and valuable, and the discussions animated and instructive. These essays and the proceedings of the Congress have been published in a special number of the Library Journal, making a quarto volume of nearly 200 pages. The public appreciation of the work of these librarians was shown by the receptions given them by the Mayors of Chicago and Milwaukee, and the Governors of Wisconsin and Minnesota, and also by the very generous railroad excursions provided by several of the Western companies across the States of Wisconsin and

Minnesota and to Lake Superior. The librarians are carefully and thoroughly preparing themselves for the great expansion of the public library department of educational agencies, which is evidently at hand in the present generation.

The enlargement of the library building and the growth of the library itself, with the proper supervision of the reading room and halls, may require some small addition to our administrative force. If the Committee on Public Property aid in placing the rooms in condition for use, after the contractors conclude their work, we shall be able to meet all the expenses of the year out of our appropriation without seriously limiting the necessary outlays for current literature and for needed additions to the reference library.

Much credit is due the lady attendants for their faithful and cheerful discharge of their duties, under very uncomfortable circumstances, during the construction of the new building. At times in the severest weather, it has been difficult to secure adequate heat in Edmands Hall and the assistants have been exposed to serious peril of health. The expectation however of an early relief and of the great improvement and comfort of the new halls, has rendered the incident personal sacrifices matters of cheerful endurance, but they are no less worthy of commendation.

In the tables which follow this report will be found the accustomed tabulated statistics, showing the actual and comparative condition of the library for the last three years, the amounts of money received from the city, from its permanent funds, and from fines and incidental sources, and the sums paid for its administration and for books.

With hearty congratulations to the gentlemen of the Board of Trustees in view of the early completion of the building, which has been for several years a subject of ear-

nest consideration and of indispensable importance to our largest success, I have the honor to remain,

Most respectfully,

BRADFORD K. PEIRCE,

Superintendent.

APPENDIX.

A.

RECEIPTS.	1886.	1885.	1884.
Dec. 31.			
Municipal appropriation.....	\$8,500 00	\$7,500 00	\$8,000 00
Fines, bulletins, etc.,.....	426 63	348 64	336 57
Cash on hand at last report.....	1 53	38	3 65
	\$8,928 16	\$7,849 02	\$8,340 22

B.

EXPENDITURES.	1886.	1885.	1884.
Dec.			
Salaries.....	\$3,755 07	\$3,333 33	\$3,599 61
Reading-room.....	337 74	400 46	383 39
Incidentals.....	279 83	247 13	267 43
Repairs.....	45 35	41 96	69 90
Furniture and fixtures.....	00 00	61 75	12 41
Printing bulletins.....	300 00		
Printing and advertising.....	141 50	129 37	35 25
Binding.....	276 20	127 55	246 52
Books.....	1,805 69	1,490 81	1,673 71
Light, \$542.71 and fuel, \$143.43.....	686 14	765 03	709 81
Distributing agencies and express	1,169 00	1,204 25	1,177 00
Blanks and stationery.....	97 89	32 06	153 55
Postage account.....	32 50	13 77	11 21
Total expenditure.....	\$8,926 91	\$7,847 47	\$8,339 79
Bal. with City Treasurer....\$ 03 at the Library.....1 22 —	1 25	1 55	43
Total balance.....	\$8,928 16	\$7,849 02	\$8,340 22

C.

CIRCULATION.	1886.	1885.	1884.
Number of days the Library was open.....	306	306	307
of holidays the Library was closed.....	7	7	7
of other week-days the Library was closed.....	....	....	....
of volumes delivered for home use.....	90,213	83,938	83,261
Average daily use.....	294.8	274.3	271.2
Largest daily use, January 30, 1886,	636	....	....
March 14, 1885,	....	541	....
March 1, 1884,	....	....	544
Smallest daily use, Aug. 11, 1886,	164	....	....
Aug. 8, 1885,	....	71	....
Nov. 19, 1884,	....	..	144
Number of books lost and not paid for.....	13	7	8
of books lost and paid for.....	2	1	1
of books worn out and withdrawn.....	105	114	62
of notices to delinquents...	636	424	797
of volumes re-covered.....	12,263	10,829	8,945
of volumes bound.....	397	237	335
of names registered during the year.....	1,790	3,834	885
Total number of names registered	5,237	3,447*	13,246

*A new registry was commenced June 8, 1885.

D.

DISTRIBUTION THROUGH THE AGENCIES AND TO THE SCHOOLS.	1886.
Books distributed at Newtonville.....	11,394
Newton Centre.....	10,482
Auburndale.....	6,873
Newton Highlands.....	6,616
West Newton.....	4,752
N. Upper Falls.....	4,471
N. Lower Falls.....	2,743
Nonantum.....	389
From October 1, Oak Hill.....	356
Total agency distribution.....	48,076
Books delivered for school use.....	3,350

E.

ACCESSIONS.	1886.	1885.	1884.
Increase by purchase.....	1,598	1,240	1,183
by gift.....	183	220	111
by binding pamphlets....	4	....	9
by binding periodicals....	110	116	76
Number of missing volumes re- stored, since last report.....	....	....	1
Total accessions for the year...	1,895	1,576	1,380
Number of volumes missing or withdrawn since last report....	120	122	71
Actual increase.....	1,775	1,454	1,309
Number of volumes in the Library as last reported.....	23,309	21,855	20,546
Total number of volumes in the Library.....	25,084	23,309	21,855
Number of pamphlets bound since last report.....	24	....	49
Number of newspapers subscribed for.....	30	39	42
of newspapers given.....	14	4	19
of magazines subscribed for.....	60	54	33
of magazines given.....	10	7	4
Total number received.....	114	94	98

F.

CLASSIFICATION, GROWTH, SIZE AND USE.	Increase during the Year.	Total number of Volumes.	Volumes issued during the Year.	PER CENT OF CIRCULATION.		
				1886.	1885.	1884.
<i>Literature.</i>						
Prose fiction and juvenile reading.....	294	5,514	59,503	65.96	67.4	67.25
Essays, poetry and drama	257	3,065	6,562	7.27	6.88	6.95
Periodicals	92	1,751	1,626	1.8	2.03	2.
Foreign Literature.....	50	524	296	.33	.34	.35
<i>History.</i>						
Geography and travels..	165	2,297	7,237	8.02	7.14	7.33
Biography.....	136	2,343	3,578	3.97	3.82	3.76
History.....	148	2,314	4,536	5.03	4.78	4.63
<i>Arts and Sciences.</i>						
Natural science and industrial arts.....	215	2,441	5,344	5.92	5.86	5.77
Political and social science.....	111	1,288	798	.88	.69	.6
Theology.....	66	1,105	547	.61	.83	1.
Reference library.....	241	2,442	186	.21	.23	.16
Assessions for the year	1,775	....	....	....	....	....
Number of volumes in the Library.....	....	25,084	....	....	....	....
Circulation for the year.....	....	...	90,213	....	....	....

G.

Received for catalogues sold in 1886.....	\$16 00
Paid City Treasurer.....	\$16 00

LIST OF PERIODICALS FOR 1887 IN THE READING ROOMS.

MAGAZINES.

American Agriculturist
 American Architect
 Andover Review
 Appalachia
 Art Amateur
 Atlantic Monthly
 Bibliotheca Sacra
 Blackwood's Magazine
 Brooklyn Magazine
 Canadian Methodist*
 Cassell's Family Magazine
 Catholic World
 Century
 Chautauqua
 Christian Thought*
 Contemporary Review
 Converted Catholic*
 Cottage Hearth*
 Country Gentleman
 Decorator and Furnisher
 Edinburgh Review
 Education*
 English Illustrated Magazine
 Folio*
 Fortnightly
 Forum
 Gardener's Chronicle
 Gardener's Monthly
 Harper's Magazine
 Haus und Herd*
 Homelitic Review*
 Illustrated London News

Lend a Hand
 Library Journal
 Life
 Lippincott's Magazine
 Literary News
 Literary World
 Littell's Living Age
 London Punch
 London Quarterly
 Magazine of American History
 Mind and Nature*
 Musical Herald*
 Nation
 Nature
 New Eng. Hist. and Gen. Reg.
 New Eng. Jour. of Education
 New Eng. Magazine
 New Englander and Yale Review
 New Jerusalem*
 Nineteenth Century
 North American Review
 Notes and Queries
 Old Testament Student*
 Outing
 Overland
 Phrenologist*
 Popular Science Monthly
 Princeton Review
 Public Opinion
 Publisher's Weekly
 Quarterly Jour. of Economics*
 Quiver*
 St. Nicholas

Sanitarian
 Sanitary Engineer
 Science
 Scientific American
 Scientific American Supplement

Scribner's Magazine
 Sunday Magazine.
 Swiss Cross *
 Westminster Review
 Wide Awake

*Represents magazines given.

NEWSPAPERS.

Abogado, El *
 Alta California
 American, The
 American Hebrew *
 Baltimore American
 Beacon, The *
 Boston Advertiser
 Boston Globe
 Boston Herald
 Boston Journal
 Boston Post
 Boston Transcript
 Boston Traveller *
 Cambridge Tribune *
 Chicago Tribune
 Christelige Talsmand, Den *
 Christian Herald *
 Christian Register *
 Christian World *
 Christliche A' pologete, Der *
 Christliche Botschafter, Der *
 Cincinnati Commercial

Commonwealth
 Current
 Evangeliste, L' *
 Harper's Bazaar
 Harper's Weekly
 London Times
 Montreal Gazette
 New Orleans Picayune
 New York Evening Post
 New York Herald
 New York Sun
 New York Tribune
 New York World
 Newton Graphic
 Newton Journal
 Our Dumb Animals *
 Philadelphia Press
 St. Louis Globe Democrat
 Saturday Evening Gazette
 Springfield Republican
 Woman's Journal *
 Zion's Herald *

*Represents newspapers given.

CITY OF NEWTON, MASS.

REPORT

OF THE

WATER BOARD

FOR THE

YEAR ENDING DEC. 31, 1886.



NEWTON:

PRESS OF THE NEWTON JOURNAL.

1887.

THE NEWTON WATER WORKS.

Organization for 1887.

WATER BOARD.

EDWARD W. CATE, *President.*

FRANCIS A. DEWSON.

DR. CHAS. FRED CREHORE.

ALDERMAN GEO. PETTEE. COUNCILMAN GEO. D. DIX,

ALBERT S. GLOVER, *Water Registrar and Clerk of Board.*

ALBERT F. NOYES, *Engineer of Board.*

H. NELSON HYDE, JR., *Superintendent.*

PAST BOARDS OF GOVERNMENT OF THE NEWTON WATER DEPARTMENT.

CONSTRUCTING COMMISSION.

1875—1878.

Hon. R. M. PULSIFER. Col. F. J. PARKER. Hon. R. R. BISHOP.

WATER COMMITTEES OF CITY COUNCIL.

1878.

Aldermen OTIS PETTEE and E. W. WOOD.

Councilmen J. WESLEY KIMBALL, NATHAN MOSMAN and G. E.
PIKE.

1879.

Aldermen G. D. ELDREDGE and E. R. SECCOMB.

Councilmen J. WESLEY KIMBALL, NATHAN MOSMAN and EDWARD
SAWYER.

1880.

Aldermen WM. P. ELLISON and J. WESLEY KIMBALL.

Councilmen NATHAN MOSMAN, GEO. E. WALES and E. W. CATE.

1881.

Aldermen WM. P. ELLISON and J. WESLEY KIMBALL.

Councilmen NATHAN MOSMAN, E. W. CATE and H. A. INMAN.

1882.

Aldermen E. W. CATE and J. WESLEY KIMBALL.

Councilmen DAVID T. BUNKER, ALSON A. SMITH and FRED. W.
FREEMAN.

WATER BOARDS.

1883.

EDWARD W. CATE, FRANCIS J. PARKER, FRANCIS A. DEWSON,
Alderman J. WESLEY KIMBALL, Councilman FRED. W. FREE-
MAN.

1884.

EDWARD W. CATE, FRANCIS J. PARKER, FRANCIS A. DEWSON,
Alderman NOAH W. FARLEY, Councilman ALBERT F. UPTON.

1885.

EDWARD W. CATE, FRANCIS A. DEWSON, CHAS. FRED. CREHORE,
Alderman NOAH W. FARLEY, Councilman ALBERT F. UPTON.

1886.

EDWARD W. CATE, FRANCIS A. DEWSON, CHAS. FRED. CREHORE,
Alderman GEO. PETTEE, Councilman GEO. D. DIX.

REPORT OF NEWTON WATER BOARD.

WATER BOARD OFFICE, CITY HALL,
WEST NEWTON, January 20th, 1887.

*To His Honor the Mayor and City Council of the City of
Newton:—*

The Water Board has the honor to present for the consideration of the City Government its report for the year ending Dec. 31st, 1886.

The work of the department during the past year has much exceeded the work of any previous year; the extensions of main pipe were commenced early in April and were continued to the last of December. The best season for this class of work is considered to be from April 15th to November 15th, and in many places work is not done at other times for the reason that it is attended with increased expense and a liability of imperfection owing to the presence of frost. The Board, nevertheless, on account of a demand for new mains, to supply houses in process of erection, deemed it expedient and alike conducive to the interests of the department and the water-takers to continue this work to the very close of the year, requiring of applicants for extensions sufficiently large guaranties to reimburse the department for the increased cost and instructing its employees, in doing the work, to use special care to leave the streets in good and safe condition for travel.

During the past year there has been laid 22,164 feet of main pipe of different sizes, as follows :

12 inch	-	-	-	1187 feet.
8 “	-	-	-	4213 “
6 “	-	-	-	13938 “
2 “	-	-	-	2826 “

The average length of main pipe laid in the eight years preceding last year is 13,493 ft.; showing an excess of 8,671 ft. laid in 1886.

In considering applications for extensions it has been the policy of the Board to discourage the laying of four inch pipe except where the extension is to be a short one and no hydrant service therefrom is required.

The weights and thicknesses of pipe used by the Board, as well as by all previous Boards or Committees having charge of the works since their completion, are those adopted by the Commissioners constructing the works; the weights were computed by the "Shedd" formula and were as follows:

Table giving the dimensions, weights, etc., of straight pipes used:

Nominal Diameters. INCHES.	Classes.	Heads to which the Pipes are adapted.	Lengths over all.		Thicknesses.	Standard Weights.
		FEET.	FT.	IN.	INCHES.	POUNDS.
24	c	224	12	4 1-2	1, 1-32	3,227
20	B	177	12	4 1-2	27-32	2,208
20	b	138	12	4 1-2	25-32	2,058
16	B	204	12	4 1-2	25-32	1,645
12	c	216	12		11-16	1,070
12	B	151	12		5-8	982
8	c	240	12		19-32	623
8	b	142	12		17-32	564
6	B	232	12		17-32	428
4	B	312	12		1-2	280

From investigations and reports of the New England Water Works Association and recommendations of the Engineer, it was deemed wise by the Board to institute experiments upon cast iron pipe to afford means of comparing the actual bursting pressure of carefully inspected pipe with the theoretical bursting pressure, upon which the Board had been acting.

Through the courtesy of the Commandant of the Watertown Arsenal opportunity was given the Board to have certain tests made there; an appropriation of \$150 was made by the Board and the prosecution of the tests was placed in the hands of Dr. Crehore and the Engineer. Under their direction six lengths each of six and eight inch pipe, taken indiscriminately from the main pipe in stock, all of which had been carefully inspected at the foundry, were taken to the arsenal and severally burst; the detailed report of these tests is hereto appended for the further information of the City Council. The tests show that the theoretical and actual strengths of the pipe are substantially the same. It is the purpose of the Board to further pursue these investigations in order to ascertain, if possible, the varying pressure to which our pipe system is subjected. This matter may be difficult to determine, but, if successful, the Board feel it very probable from the information obtained that it may be able, with safety, to reduce the weight heretofore used, and thereby to save to the city considerable of the amount annually expended for main pipe.

As stated in our report for 1885, the Board felt confident of having on hand at the opening of the working season a sufficient quantity of pipe to meet all demands likely to be made upon it for extensions during the year; the demand, however, was so great that the supply became exhausted in November and the Board was obliged to make a purchase of seventy-five tons of six-inch pipe for immediate delivery; the order was placed with the Warren Foundry Co. and the price paid was \$32 per ton delivered at Newtonville.

At the same time the Board, believing that the interests of the department would best be served by their making a contract for a supply of main pipe for the season of 1887, and believing further, in view of the extensions called for this

year, and the great probability of a like demand next year that a large order would be expedient, under authority of the City Council made a contract for six hundred tons of main pipe for delivery in the spring of 1887; the contract price is \$30.40 per ton for 12 inch pipe; and \$31.30 per ton for 8 inch, 6 inch and 4 inch pipe; the price of pipe at date of writing and the prospect of a considerable rise in iron in the near future have already demonstrated the wisdom of this purchase.

SUPPLY AND SERVICE PIPE.

Besides the length of main previously mentioned, 145 feet of supply pipe and 14,748 feet of service pipe have been laid. The number of supply pipes laid was five and the number of service pipes was 298. A larger number of services was laid than in any year since the works were constructed.

The proportion of lead pipe to iron pipe used was greater than in 1885, and the Board feels that the public is gradually coinciding in its opinion that lead is the cheapest and best pipe for this class of work. The Board is considering the expediency of insisting upon using lead pipe in all cases where services are applied for to be laid by the city.

THE WATER ORDINANCE.

The recommendation in the Board's report for 1885 in the matter of a revision of a water ordinance met with the approval of the City Council, who requested the Board to submit a draft of an ordinance embodying such changes as might seem to the Board desirable. The Board, consequently, after mature deliberation, prepared a new ordinance embodying such provisions as experience in the management and direction of the department has shown to be wise. This ordinance was reported to the City Council on March 22nd,

and referred to the Committee on Ordinances, who, on June 28th, reported back to the City Council an amended ordinance, which, while it embodied some of the recommendations of the Board, omitted others, in the opinion of the Board, quite as important for the proper government of the department. The ordinance, reported by the Ordinance Committee, was an improvement upon that preceding it, but it is a matter of regret to the Board that its recommendations were not, at least, submitted to the City Council for its consideration. The Board feels that the water ordinance is still susceptible of considerable improvement.

METERS.

To January 1st, 1886, as shown by our last report, there were in use on the works nine hundred and ninety-eight meters; these meters, under the provisions of the water ordinance then in force, had been furnished and set by the department for water takers applying for them, at the expense of the applicant who was also to bear the expense of keeping them in repair and in perfect registration. Under this system there were further set, in 1886, seventy-five meters. The new ordinance, however, made a very important and radical change in the system of assessing water rates. By its provisions all service pipes supplying other fixtures than ordinary faucets for domestic use must be metered. The meters are furnished, set, maintained and to be renewed by the department, the water takers paying an annual rental for their use and being at no other expense in connection therewith except to protect them against frost or repair all frost damage. This change necessitated the purchase of a large number of meters and the Board contracted with the National Meter Co. for one thousand Crown meters for delivery from time to time to March 1st, 1887.

In making this contract the Board was guided by its own experience with this meter, which has been used by the department since 1880 and the record of which has been highly satisfactory.

At the close of the year five hundred and twenty-five of these meters had been set, and they will all be in place, ready for use, by March 1st next, the beginning of the new water year.

ADDITIONAL SUPPLY.

In the report of the Water Board to the City Council for the year 1885 it was stated that the Water Board, in behalf of the city, had entered into a contract with the Manhattan Artesian Well Company for furnishing the city with an additional water supply, by means of driven wells, of not less than 250,000 gallons, nor more than 300,000 gallons, per day of twenty-four hours; said amount to be determined by the results obtained on the 31st day after a continuous pumping during the preceding thirty days.

It was further agreed that the city should have the option of contracting with said company for a further supply, not to exceed 1,500,000 gallons daily, upon the terms of the agreement already made.

At a meeting holden March 31st, the Board voted to avail themselves of the aforesaid conditions of the contract and the company was requested to continue their work, the time for its completion being extended to July 1st.

Shortly after resuming work we were deprived of the service of the executive officers of the company, by a serious accident to the president and the unavoidable absence of the superintendent upon other contracts in the South; consequently the contract was not executed with the intelligence and energy with which it would otherwise have been. The

contract was finally completed July 1st, and the wells were found to yield, after a careful test, as per terms of the contract, upon which a final payment was made, 283,000 gallons per 24 hours.

The Board feel that this addition will be a valuable auxiliary to the supply of the department in the near future.

For a full description of the work and its results we would refer you to the appended report of the Engineer.

HIGH SERVICE.

The matter of a high service supply still engages the attention of the Board and much thought has been given during the year to its consideration. It is the intention of the Board to have formulated, by the time action in the matter becomes necessary, the best possible plan for the solution of this most important problem.

CONDITION OF THE WORKS.

The usual satisfactory condition of the works has been maintained during the year. At the Pumping Station the test of the driven wells having been completed, pipes connecting them with the pump well were laid. The Board is now considering the matter of grading more completely the grounds about the station and the dwelling of the employees. The Board is of the opinion that it is desirable to do this work and feels that the expense would be justified by the improved appearance thereby secured.

On the fifteenth of December the Board made a contract with Frederic Tudor for steam heating apparatus to heat the dwelling house of the pumping engineer and firemen and the engine room of the Pumping Station. The apparatus is to include a horizontal steel tubular boiler, which, besides being used for heating purposes when the other boilers are not being

used, is intended to furnish steam for the jackets of the engines; the steam can be furnished for this purpose at a much higher pressure than is necessary to run the engines, thus effecting a higher duty. It has heretofore been necessary, when not pumping, to use one of the large boilers to heat the engine room and in the opinion of the Board the change will be an economical one. The contract price is \$1550 and the work is to be completed within thirty days from date.

At the filter basin and reservoir but little work has been needed except that usually required to keep them in good order and condition. The basin has been kept free from vegetable growth and no complaints have been received of the quality of the water attributable to such contamination.

The usual care has been taken to preserve the good quality of the water in the mains and where the circulation is imperfect the mains have been frequently flushed. The Board has now under consideration the expediency of making a number of short extensions to complete circulation to obviate the necessity of their constant flushing, which is a source of considerable expense and greater trouble.

APPENDIX.

Appended will be found a description in detail of the work performed by the Department during 1886, together with an account of stock on hand, the new water ordinance and the rules recently adopted by the Board, under said ordinance, for the government of the Department.

Respectfully submitted,

THE NEWTON WATER BOARD.

By EDWARD W. CATE, *President*.

DETAILS OF EXTENSIONS MADE IN 1886.

STREET.	WARD.	LOCATION.	LENGTH OF EACH SIZE IN FEET.				GATES.	HYDRANT.	CUBIC YARDS ROCK.
			12-IN.	8-IN.	6-IN.	4-IN.			
Ballard.....	6	From Ward, north.....	-	-	228	-	1	-	-
Beecher Place.....	6	From Station, north.....	-	-	362	249	1	-	84.
Bellevue.....	1	Extended west.....	-	-	317	-	-	-	-
Berkeley Place.....	4	From Maple, east.....	-	-	-	370	1	-	-
Bourne and Woodbine.....	4	" Bourne, north & west	-	-	409	332	-	-	-
Boylston.....	5	Extended east.....	-	-	93	-	-	-	32.8
Chandler.....	2	Extended south.....	-	-	370	-	-	-	7.
Clifton.....	2	From Nevada, south.....	-	-	-	226	-	-	-
Crafts.....	2	Extended west.....	-	-	83	-	-	-	-
Crescent and Beach.....	1	Extended south.....	-	-	110	190	-	-	-
Dunklee.....	5	Extended west.....	-	-	550	-	-	-	-
Eddy.....	2	Extended north.....	-	-	118	-	-	-	-
Faxon.....	1	From Watertown, north..	-	-	457	-	1	-	-
Floral Avenue.....	5	Extended west.....	-	-	213	-	-	-	-
Fuller.....	3	From Washington, east..	-	661	-	-	1	1	-
Gibbs.....	6	Extended east.....	-	-	46	177	-	-	17.
Grant Avenue.....	6	From Beacon, north.....	-	270	-	-	1	1	-
Grove.....	4	Extended south.....	-	820	-	-	-	1	-
Hartford.....	5	From Erie Avenue, south	-	-	249	-	-	-	-
Hawthorn.....	3	From Lenox, west.....	-	-	338	-	-	1	-
Homer and Cemetery Avenue	6	From Walnut, west.....	-	1034	1978	-	2	3	-
Hyde.....	5	From Centre, west.....	-	-	317	-	-	-	-
Hyde.....	5	From Walnut, east.....	-	-	168	-	1	-	-
Irving.....	6	Extended south.....	-	-	107	-	-	-	-
Total, Carried Forward...	.....	.....	-	2785	6513	1544	9	7	140.8'

DETAILS OF EXTENSIONS MADE IN 1886 (Continued).

STREET.	WARD.	LOCATION.	LENGTH OF EACH SIZE IN FEET.				GATES.	HYDRANT.	CUBIC YARDS ROCK.
			12-IN.	8-IN.	6-IN.	4-IN.			
<i>Brought Forward.</i>									
Jackson	6	From Station, west.....	-	2785	6513	1544	9	7	140.8
Kenrick	7	Extended east.....	-	-	548	-	1	1	59.
Kimball	6	From Ridge Ave., south..	-	-	453	-	-	-	-
Knowles	6	Extended south.....	-	-	181	59	-	-	-
Newtonville Avenue.....	2	Extended east.....	-	-	-	-	-	-	-
Norwood & Clarendon Aves..	2	From Harvard, east & so.	-	-	166	-	-	-	-
Oakland Avenue.....	4	From Woodland Ave. so.	-	-	531	275	1	1	-
Prince	3	From Tepmle, south.....	-	-	327	-	1	1	-
Ripley	6	From Knowles, west.....	-	-	738	-	1	1	13.3
Off River	3	From River, north.....	-	-	334	37	-	-	-
Station and Jackson.....	6	Extended south.....	-	1428	394	457	1	-	-
Stanford and Pine.....	4	Extended west and south	-	-	1727	-	2	2	494.2
Summer	6	Extended north.....	-	-	590	-	1	1	-
Terrace	6	Extended north.....	-	-	142	-	-	-	3.2
Walnut	5	From Hillside, east.....	-	-	373	-	1	-	-
Watertown	5	From Hyde, North.....	141	-	-	-	-	-	-
Watertown	2	From Beacon, south.....	1046	-	-	-	1	1	-
Watertown	2	From Walnut, east.....	-	-	-	454	1	1	-
Wiswall	2	From Parsons, east.....	-	-	255	-	-	-	-
Woodman	6	From Parsons, west.....	-	-	376	-	-	1	2.
Woodman	6	From Hammond, south..	-	-	183	-	1	-	-
Woodman	6	Extended south.....	-	-	107	-	-	-	-
Total			1187	4213	13938	2826	21	20	712.5

Length of Main Pipe laid during the year 1886, 22,164 feet.

DESCRIPTION OF MAIN PIPE LAID TO DEC. 31, 1886.

DATE OF LAYING.	LENGTH OF DIFFERENT SIZES, IN FEET.							TOTAL.
	24-IN.	20-IN.	16-IN.	12-IN.	8-IN.	6-IN.	4-IN.	
Laid previous to Jan'y 1878,	761	18,012	2,457	58,932	53,321	116,815	23,235	273,533
Laid during 1878.....	-	-	-	-	180	8,391	2,085	10,656
Laid during 1879.....	-	-	-	1,083	947	13,148	3,122	18,300
Laid during 1880.....	-	-	-	754	1,484	9,728	4,053	16,019
Laid during 1881.....	-	-	-	-	484	7,449	2,483	10,416
Laid during 1882.....	-	-	-	-	1,211	10,416	2,605	14,232
Laid during 1883.....	-	-	-	1,242	2,656	7,941	2,304	14,143
Laid during 1884.....	-	-	-	242	-	8,951	983	10,176
Laid during 1885.....	-	-	-	850	2,082	11,047	3,626	17,605
Laid during 1886.....	-	-	-	1,187	4,213	13,938	2,826	22,164
Total.....	761	18,012	2,457	64,290	66,578	207,824	47,322	407,244

Total length of main laid to date 407,244 feet or 77.13 miles.

DETAILS OF SERVICES LAID IN 1886.

MONTH.	IRON PIPE.						LEAD PIPE.										TOTAL.			
	4-IN.		2-IN.		1½-IN.		1-IN.		¾-IN.		¾-IN.		½-IN.							
	No.	Length in feet.	No.	Length in feet.	No.	Length in feet.	No.	Length in feet.	No.	Length in feet.	No.	Length in feet.	No.	Length in feet.	No.	Length in feet.				
January .	1	15.20	1	5.10	1	5.30	1	18.60	1	141.80	9	570.10	5	204.80	36	1359.50	5	258.55		
February .																	7	273.50		
March .																	9	401.80		
April . .																				
May . . .																				
June . . .																				
July . . .																				
August . .																				
September																				
October .																				
November																				
December																				
Total . .	2	49.00	2	301.86	4	347.50	6	477.40	98	2796.25	11	878.60	11	861.35	115	6860.95	48	2175.65	298	14748.50

Total iron, 3971.95 feet. Total lead, 10,776.55 feet.
 NOTE. The service pipes from main to abutters' line are, in all cases, lead.

SUPPLY PIPE LAID IN 1886.

STREET.	WARD.	LOCATION.	LENGTH IN FT.		TOTAL.
			2-IN.	1½-IN.	
Cemetery Ave..	6	Extended South		115	115
Eddy Place.....	3	From Washing- ton, North....	203		203
Off Middle St...	1	From Middle, North....	265		265
Reservoir	5	From Chestnut, West.....		379	379
Washing'n Ave.	4	Extended East	492		492
Total.....			960	494	1,454

NUMBER AND LENGTHS OF SERVICES LAID TO DATE.

DATE OF LAYING.	NUMBER.	LENGTH IN FEET.
Laid to January 1878.....	1,497	104,065
During 1878.....	188	15,449
During 1879.....	232	13,670
During 1880.....	228	18,039
During 1881.....	267	14,675
During 1882.....	169	10,904
During 1883.....	159	11,709
During 1884.....	179	12,113
During 1885.....	215	12,367
During 1886.....	298	14,748
Total.....	3,432	227,739

METERS SET.

The following meters were set during 1886: Crown 598, Worthington 1, Ball & Fitz Piston 1, Union Rotary 1, Hersey 1.

CLASSIFICATION OF METERS NOW IN USE.

PATTERN.	SIZES.							TOTAL.
	$\frac{1}{2}$ -IN.	$\frac{5}{8}$ -IN.	$\frac{3}{4}$ -IN.	1-IN.	1 $\frac{1}{2}$ -IN.	2-IN.	3-IN.	
Union Piston..	-	194	19	1	-	-	-	214
Union Rotary.	-	44	2	4	-	-	-	50
Worthington...	-	299	6	3	-	-	1	309
Crown	980	-	10	16	1	2	1	1,010
Desper.....	-	3	-	-	-	-	-	3
Spooner.....	-	-	2	-	-	-	-	2
Hersey.....	1	-	-	-	-	-	-	1
Indicators.....	-	-	-	-	-	-	-	2
Total.....	981	540	39	24	1	2	2	1,591

WATER PUMPED AND CONSUMED.

There were pumped during 1886, 247,966,122 gallons, about 25,000,000 in excess of the quantity pumped in 1885. The consumption for the year averaged 675,298 gallons per day ranging from 220,915 gallons the minimum, April 7, to 1,999,537 gallons, the maximum consumption, July 9. The accompanying tables show the consumption by months since 1878.

DAILY AVERAGE CONSUMPTION OF WATER FROM 1878 TO 1886, INCLUSIVE.

MONTH.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.
January.....	286,234	309,645	386,524	406,212	445,257	526,943	449,079	532,659	533,558
February.....	274,792	300,275	341,920	397,346	470,841	481,437	444,011	563,741	531,434
March.....	227,484	300,048	325,996	354,168	541,149	503,804	473,193	466,218	570,673
April.....	221,508	297,850	381,002	392,617	477,540	494,281	451,722	543,734	575,883
May.....	294,278	388,671	514,382	466,234	510,951	568,500	502,412	566,650	645,267
June.....	369,844	455,924	719,348	475,573	646,752	719,838	679,588	835,919	840,520
July.....	557,446	488,733	515,623	520,529	764,985	818,209	626,404	870,227	1,052,536
August.....	386,916	502,418	540,408	510,214	944,486	1,042,608	560,032	660,202	742,347
September.....	374,517	387,366	530,826	550,974	712,994	882,348	663,817	673,137	716,465
October.....	343,431	370,238	419,474	467,155	601,595	511,039	552,219	580,189	678,351
November.....	304,208	361,446	387,633	440,689	520,945	482,570	476,116	529,666	611,504
December.....	297,890	336,777	364,196	426,752	501,669	460,994	497,075	532,023	592,510
Daily average..	328,212	374,949	452,032	450,705	594,930	624,381	532,804	614,968	675,298

RECEIPTS FOR THE YEAR 1886.

Received on account of water rates . . .	\$34,213 63
Received on account of * meter rates . . .	21,861 54
Received on account of service and meter account	6,311 50
Received on account of construction account . . .	929 78
Received on account of maintenance account . . .	6 00

Total receipts for the year \$63,322 45

*Including \$1,714 29 for water used in 1886 for street sprinkling paid for January 15 1887.

EXPENDITURES FOR THE YEAR 1886.

Maintenance Account.

Amount of appropriation . . .	\$13,000 00	
Received from stove sold . . .	6 00	\$13,006 00
Expense of Registrar's office, including salary of Registrar, Inspector, clerk-hire, travelling and miscellaneous expenses	\$3,184 14	
Expense of Superintendent's office, including salary of Superintendent, clerk-hire, travelling, miscellaneous and pipe-yard expenses . . .	1,996 47	
Expense of pumping station, including salary of engineer, fireman, fuel, repairs, etc.,	4,864 58	
Expense of maintaining reservoir	733 32	
	<hr/>	<hr/>
<i>Amounts carried forward, .</i>	\$10,778 51	\$13,006 00

<i>Amounts brought forward,</i> . . .	\$10,778 51	\$13,006 00
Expense of maintaining mains . . .	560 94	
Expense of maintaining hydrants . . .	222 80	
Expense of maintaining services . . .	182 58	
Expense of maintaining filter basin	822 98	
Expense of maintaining stand pipes	87 20	
Expense of maintaining city teams	193 35	
Expense of maintaining drinking posts	21 75	
Expense of maintaining watering troughs	32 57	
Expense of maintaining tools	89 83	
	<hr/>	<hr/>
Total	\$12,992 51	\$12,992 51
		<hr/>
Balance, unexpended		13 49

SERVICE AND METER ACCOUNT.

Amount of appropriation		\$6,000 00
Expended for new services	\$2,930 03	
Expended for new meters	2,014 53	
Expended for maintaining services	139 85	
Expended for maintaining meters	338 45	
Expended for inspection	387 53	
Expended for city teams	188 47	
	<hr/>	<hr/>
Total		\$5,998 86
		<hr/>
Balance, unexpended,		\$1 14

REBATE ACCOUNT.

Amount of appropriation	\$500 00
Amount refunded to water-takers who, after paying in advance water rent in full for the year, vacated their houses and had the water shut off therefrom by the depart- ment	351 07
	<hr/>
Balance, unexpended	\$148 93

CONSTRUCTION ACCOUNT.

Expended for new mains	\$19,690 80
Expended for new hydrants	2,661 41
Expended for new services	5,832 99
Expended for new stand pipes	189 97
Expended for new water gates	789 04
Expended for new tools and repairs	1,189 14
Expended for new gate boxes	509 81
Expended for filter basin connection	737 55
Expended for new meters	7,234 42
Expended for city teams	264 53
Expended for pumping station improvements	42 49
Expended for pumping station dwelling	40 70
Expended for meter testing room	26 79
Expended for pumping station drain	105 01
Expended for pumping station heating appa- ratus	49 25
Expended for pumping station additional supply	5,732 70
Expended for sundries	7 09
	<hr/>
Total	\$45,103 69
Cr. - By receipts during the year	929 78
	<hr/>
Net expenditure during 1886	44,173 91
Net expenditure to Dec. 31, 1885	999,315 72
	<hr/>
Net expenditure to Dec. 31, 1886,	\$1,043,489 63

STATEMENT OF SERVICES IN USE DECEMBER 31, 1886.

Number of services laid throughout the city December 31, 1886	3,432
Number of services shut off for non-pay- ment, remaining off December 31, 1885	6
Number of these turned on during the past year	0
Leaving of these still shut off	6
Number of services shut off for non-pay- ment during the past year	3
Number of these turned on again during the year	2
Leaving of these still shut off	1
Number of services shut off by request, remaining off December 31, 1885	151
Number of these turned on during the past year	65
Leaving of these still shut off	86
Number of services shut off by request during the past year	300
Number of these turned on again during the year	224
Leaving of these still shut off	76
Number of services once turned on, re- maining off December 31, 1886	169
Number of services never turned on	116
Total number of services remaining off December 31, 1886	285
Leaving number of services in use December 31, 1886,	3,147

REPORT OF WATER BOARD.

COMPARATIVE STATEMENT OF RECEIPTS AND EXPENDITURES FROM 1878 TO 1886.

YEAR.	EXPENDITURES.				RECEIPTS.					DEFICIT.
	INTEREST.	MAIN-TENANCE.	SERVICES AND METERS.	TOTAL.	WATER RATES.			TOTAL.		
					FROM CITY.	OTHER SOURCES.	SERVICES AND METERS.			
1878...	\$44,800 00	\$9,777 69	\$6,997 45	\$61,575 14	\$5,896 74	\$17,598 33	\$5,280 55	\$25,775 62	\$35,799 52	
1879...	45,500 00	8,841 20	4,860 57	59,201 77	6,132 50	21,023 02	3,138 68	30,294 20	28,907 57	
1880...	47,750 00	9,223 70	4,212 24	61,185 94	8,919 00	24,815 58	6,192 40	39,926 98	21,258 96	
1881....	48,900 00	12,682 49	4,951 20	66,533 69	8,533 18	26,953 10	5,206 48	40,692 76	25,840 93	
1882....	49,600 00	13,811 62	5,590 63	69,002 25	8,729 01	32,703 38	5,454 59	47,886 98	21,115 27	
1883...	50,900 00	16,266 01	5,498 65	72,664 66	12,851 22	36,476 73	5,727 50	55,055 45	17,609 21	
1884...	52,500 00	13,351 94	5,584 97	71,436 91	12,127 56	37,641 45	5,879 38	55,648 39	15,788 52	
1885....	53,100 00	12,873 49	6,471 25	72,444 74	14,278 89	39,567 77	5,471 52	59,318 18	13,126 56	
1886...	54,380 00	12,986 51	5,998 86	73,365 37	12,891 29	43,183 88	6,311 50	62,386 67	10,978 70	

ADDITIONAL SUPPLY—REPORT OF ENGINEER.

OFFICE OF CITY ENGINEER,
WEST NEWTON, September 30th, 1886.

To the President and Members of the Water Board.

GENTLEMEN:—I would respectfully report that I have completed the pumping test, made to determine the amount of water which can be obtained from the well tubes, driven under the direction of the Manhattan Artesian Well Company of New York City as per contract with the city of Newton to furnish an additional supply of water by the means of driven wells.

Before detailing the results of the pumping test a review and description of the work performed may be of interest.

In order to determine accurately the various strata through which the pipes were being driven, and to insure the perfect condition of the perforated or slotted pipe which was to form a portion of the walls of the wells, drive pipes, two inches larger in diameter than that intended to be used for the well, were first driven to bed rock or into the hard pan overlaying the bed rock. Inside of these the permanent well pipes were lowered, to which were attached a piece of slotted pipe of such a length as the strata of course water-bearing material would warrant, and the drive pipes withdrawn.

Under the first portion of the contract, six inch drive pipes and four inch well pipes were used and nine pipes were driven, two of which struck boulders before reaching a coarse stratification, and three of the pipes driven developed a stratification too thin to be of value and there were but four effective well tubes left in the ground.

Under the second portion of the contract, five pipes were driven, four operative, and one inoperative on account of the

slotted pipe being put in longer than the stratification would warrant. Work was commenced under the first contract Nov. 30, 1885, and completed Feb. 9, 1886. Under the second contract work was commenced April 24, 1886, and completed July 1, 1887.

In order to test the capacity of the wells they were temporarily connected together by a six inch suction pipe, enlarging into an eight inch suction, and connected to a 10x16x18 Knowles pump, placed at the same elevation as the high pressure pump in the basement of the pumping station, in order to conform to all of the conditions of the contract. A six inch force main was laid from the pump to the pump well.

The accompanying plan will show the location of the wells with respect to the pumping station and filter basin. There are also shown two 2 1-2 inch and one 2 inch tube which were driven outside of the system and were used to determine the level of the ground water during the test.

A preliminary test to determine approximately the capacity of the wells was begun at noon, July 19. It may be of interest to note that by running the pump at about 40 strokes per minute, the elevation of the water in the test tubes was lowered from 15 to 17 feet in thirty minutes and from 20 to 22 feet in two hours. Upon reducing the speed of running the pump to 27 strokes per minute the elevation of the water in the test wells was from 16 1-2 to 19 feet and represented by measurements taken in the pump well, a yield of 325,000 gallons per 24 hours. A thermometer was hung so that the water as it was discharged from the pipe must pass over and about it. Readings were taken several times during each day and at no time did the temperature vary from 50 degrees F.

Pumping was continued each day from about 8 o'clock A. M. to 5 o'clock P. M. from July 19th to August 2nd and it was

found that the pumps could be run from 27 to 30 strokes per minute, lowering the ground water as shown from measurements taken in the test tubes from 16 to 19 feet and showing a yield of 309,000 to 335,000 gallons per 24 hours. Each day the recovery of the level of the ground water was noted and found to vary but little from 12 to 14 feet in thirty minutes, with a full recovery before the next morning.

In order to determine approximately what effect each well had on the total yield a series of tests were made by cutting each well out of the system with the following results and in the following manner.

The full set were drafted upon until the ground water had reached its normal flow, when a measurement was made of its yield. The extreme wells were cut off from the set, one by one, in their regular order, until the draft was upon a single well. The yield from each set was as follows :—

Drafting from 8 wells the yield was 363,000 gallons per 24 hours.

"	"	7	"	"	"	"	352,000	"	"	"	"
"	"	6	"	"	"	"	323,900	"	"	"	"
"	"	5	"	"	"	"	271,800	"	"	"	"
"	"	4	"	"	"	"	269,300	"	"	"	"
"	"	3	"	"	"	"	259,200	"	"	"	"
"	"	2	"	"	"	"	185,830	"	"	"	"
"	"	1	"	"	"	"	170,000	"	"	"	"

The final test upon which payment was to be made was begun at 8 o'clock A. M. Aug. 19th. The pump was run at a rate to insure the draft upon the ground water to the limit of its suction lift, which was found by gaugings in the test tubes to be between 22 and 23 feet, or, as indicated by the vacuum gauge, 22 to 25 inches. After running about four days the yield diminished suddenly from over 300,000 gallons to about 110,000 gallons per 24 hours. The level of the ground water could not be reduced more than eleven feet and the vacuum gauge showed 10 inches. An examination of the

suction pipe showed no leak, but on cutting out the wells, one after the other, it was found that after cutting out one well near the centre of the set the vacuum gauge showed 25 inches and the yield from four wells was 208,000 gallons per 24 hours.

This well was entirely cut out from the system and the balance of the test was made upon seven wells alone. Excavation showed that in the absence of the inspector and without his knowledge a piece of slotted pipe was inserted in the main pipe about eleven feet from the surface of the ground in a coarse stratification, and the lowering of the ground water rendered inoperative the balance of the wells below this level. To offset for this delay and diminished draft upon the ground water the test was continued until 10.45 A. M. September 24th.

In order to accurately measure the water being pumped, a four inch "Gem" meter was attached to the force main and the water passed through it. As a check upon the accuracy of the meter, the capacity of the pump well was measured and repeated comparisons made; the results showed a variation of from one per cent to two per cent. The closeness of these results are somewhat surprising when it is considered that each pulsation of the pump must be felt on the meter.

The final day's test showed a yield of 283,000 gallons per 24 hours upon which payment should be made.

As previously stated the ground water was lowered to the limit of the suction lift of the pump and the pumping continued at a speed to insure the maximum yield of water. This insured the reduction of the plane of the ground water to its lowest level at the end of the test. Under these conditions the rapidity with which the level of the plane of the ground water was raised until it reached its normal height, and the variation of the yield of water, between the first and

the last days of the test, indicate the permanency of the supply.

The following table will show the rapidity of the rise in the level of the ground water at the end of the test in the three wells used for observations:—

RECOVERY OF GROUND WATER, SEPT. 24, 1886.

Time.	Grades.			
	WELL No. 43	WELL No. 31	WELL No. 10	
10.45 A. M.	72.75	75.85	82.30	Stopped Pumping
11.00	77.95	80.	84.60	
11.15	80.	81.50	85.70	
11.30	81.10	82.50	86.45	
11 45	82.20	83.50	87.10	
12. M.	83.10	84.45	87.70	
12.15 P. M.	84.15	85.25	88.25	
12.45	86.10	87.20	89.55	
1.15	87.15	88.15	90.20	
1.45	87.85	88.80	90.60	
2.45	88.50	89.35	91.25	
3.45	88.75	89.80	91.45	
4.45	89.05	90.00	91.80	

When it is considered that the test was made in the driest portion of the year, that the decrease in the yield was less than 16 per cent and that the recovery of the plane of the ground water to its normal height was effected in less than twenty-four hours, it would appear that an under-ground current or stream was tapped and the yield limited by the thickness and coarseness of the water bearing strata overlying the bed rock.

Respectfully submitted,

ALBERT F. NOYES,

City Engineer.

REPORT OF TESTS OF TWELVE CAST IRON PIPES MADE AT
WATERTOWN ARSENAL, JULY 29, 1886.

The pipes were prepared for testing by dressing the surface of the bore at each end a distance of about 4 inches, for the purpose of securing a good surface for the leather packings to seal against.

It was found necessary to cut off a short section of the spigot end of the pipes before dressing the surface of the bore, removing the metal that was too hard to cut with ordinary lathe tools. In this way the diameters of the bore at the ends of the 6 inch and 8 inch pipes were respectively increased to 6.25 inches and 8.19 inches.

The interior pressure acted against about 1 inch in length of the dressed surface, being that part of the bore covered by the lips of the leather packings.

It was not thought that this method of preparation contributed any tendency to rupture at the ends, on account of the small ring of thinner metal which was exposed to the hydrostatic pressure, and this ring was reinforced by the metal of the pipe beyond that which was not directly strained. To dispel any doubts upon this point, the 8 inch pipes numbers 3, 5 and 6 were banded with a wrought iron strap at the spigot end, and the 6 inch pipes numbers 7, 8, 9 and 11 were similarly banded with a stout cast iron ring.

An examination of the results would seem to confirm the belief that the bursting strength of the pipes was not influenced by the dressing of the metal of the bore at the ends.

An air rent 1-10 inch diameter was drilled in each pipe near the spigot end, which was plugged with a tapering steel pin after the pipe was charged with water. None of the fractures occurred through the vent holes.

The testing was done by the gradual increase of hydrostatic pressure in the bore of the pipes till rupture took place,

weighing the pressure with the high pressure Hydraulic Holder gauge of the Testing machine.

The thickness of the pipes is given where accessible to measure.

F. H. PARKER, Major Ordinance Dept. U. S. A.

Commanding.

Correct: J. E. HOWARD.

TEST NUMBER.	NUMBER OF PIPE.	NOMINAL SIZE.	MARK & NUMBER.		LENGTH AFTER CUTTING OFF SPIGOT END.	DIAMETERS.		LENGTH BE- TWEEN DRESSED ENDS OF BORE.	BURST- ING PRES- SURE, LBS. PER SQ. IN.	DESCRIPTION OF FRACTURE.
			Mark.	Number.		Outside.	Bore.			
4305	1	8 in.	R D W & CO. 1884. C N W W.	144	12 ft. 2.92 in.	9.14 in.	7.93 in.	11 ft. 2.73 in.	2079	Granular. A few blow holes. Granular. Some blow holes. Granular. Numerous blow holes. Granular. Very spongy.
4306	2	8 in.	"	232	12 ft. 2.29 in.	9.19 in.	7.97 in.	11 ft. 2.11 in.	2144	
4307	3	8 in.	"	285	12 ft. 2.42 in.	9.19 in.	7.94 in.	11 ft. 2.36 in.	1916	
4308	4	8 in.	"	244	12 ft. 2.23 in.	9.13 in.	7.96 in.	11 ft. 2.04 in.	1808	
4309	5	8 in.	"	101	12 ft. 2.29 in.	9.13 in.	7.98 in.	11 ft. 2.17 in.	1916	Granular, uni- form.
4310	6	8 in.	"	266	12 ft. 2.73 in.	9.15 in.	7.98 in.	11 ft. 2.60 in.	1968	
4311	7	6 in.	W F N W W B 1885.	1522	11 ft. 10.48 in.	7.12 in.	6.05 in.	11 ft. 0.42 in.	1657	
4312	8	6 in.	"	996	11 ft. 10.29 in.	7.11 in.	6.05 in.	11 ft. 0.29 in.	1689	
4313	9	6 in.	"	995	11 ft. 10.11 in.	7.13 in.	6.01 in.	11 ft. 0.04 in.	1816	Granular, uni- form.
4314	10	6 in.	"	1154	11 ft. 10.11 in.	7.10 in.	6.00 in.	10 ft. 11.73 in.	1845	
4315	11	6 in.	"	1602	11 ft. 10.29 in.	7.11 in.	6.01 in.	11 ft. 0.54 in.	2063	
4316	12	6 in.	"	1575	11 ft. 10.11 in.	7.12 in.	6.01 in.	11 ft. 0.04 in.	1933	

CITY OF NEWTON, MASS.

ORDINANCE XX.

RELATING TO THE WATER DEPARTMENT.

SECTION 1. A Water Board is hereby established, consisting of five persons, one of whom shall be a member of the Board of Aldermen, one a member of the Common Council, and three at large. The offices of Water Registrar and Superintendent of Water Works are hereby established.

SECT. 2. The Superintendent shall have general superintendence of the out-of-door work of the department, under the direction of the Water Board.

Whenever any repairs are made, or new work done, he shall make a detailed report to the Board of the kind of work performed, where located, the amount thereof, the quantity and kind of material used therefor, to whom chargeable, and any other particulars that may be deemed desirable or necessary. He shall perform any other duties prescribed by the Water Board.

SECT. 3. The Water Registrar shall keep full, complete, and detailed records of all the doings and correspondence of the Water Board; also similar records and accounts of all the work done by the officers and employees of the department, showing the kind of work done, the location and cost thereof, and the account to which it is charged.

He shall also keep a full record of the name of each water-taker, the location and description of the building in which the water is used, the character of its use, the kind of

service, the quantity supplied, and the amount charged therefor, all properly arranged for convenient reference.

He shall also keep a full record of the amount of water daily pumped, consumed and in store; and, generally, of all facts pertaining to the condition and use of the works, that may be desirable for reference.

He shall perform any other duties prescribed by the Board.

SECT. 4. The Water Board shall have the general supervision and management of the water works, and shall have power to appoint, hire, dismiss, discharge, and fix the compensation of such other officers and employees of the department (except Superintendent and Registrar) as they shall deem necessary for a proper transaction of its business.

SECT. 5. The Board shall annually, in the month of January, present to the City Council a report to and including the thirty-first day of December of the preceding year, containing a full statement of the doings of the Department, of the condition of the work, and such other matters as they may deem proper.

SECT. 6. The Board shall annually, in the month of September, submit to the Committee on Finance of the City Council an estimate, in writing, of the receipts and expenditures of the Department for the ensuing year.

SECT. 7. All bills and vouchers of purchases for the Department, and pay-rolls and other bills for labor, shall be approved in writing by at least three members of the Board.

SECT. 8. All books of account and records in the Department shall, at all times, be open to the inspection of any committee of the City Council designated to examine them.

SECT. 9. The Board shall attach a meter to all services supplying other fixtures than faucets; also to fixtures supply-

ing only faucets where more than three are used. The Board shall also furnish meters to all water-takers who desire to use them, regardless of the fixtures supplied.

All meters hereafter set shall be furnished, maintained, and renewed at the cost of the city; and the Board shall charge an annual rental therefor; provided, nevertheless, that any meter injured through the negligence of a water-taker, or by frost, shall be repaired at his expense.

SECT. 10. All premises where water is taken may at any reasonable time be inspected by a properly authorized officer of the Department; and full authority is hereby given to the Board to order such inspection whenever they deem it for the interests of the Department that it be made.

SECT. 11. The owner and the occupant of the premises, in which water is used, who fails to protect his meter from frost, or fails to keep the service pipes and fixtures in good order, and neglects to repair them in three days after they have become defective, or neglects to shut off the water to prevent waste, shall be liable to a forfeiture of two dollars; and if the forfeiture is not paid within two days after notice, the water shall be cut off and shall not be let on until the waste is stopped, and the fine is paid, together with two dollars for shutting off and letting on the water.

In case of a second offence within one year the water shall be shut off and shall not be let on except by a vote of the Board, and the payment of such forfeit, not exceeding ten dollars, as the Board may impose.

SECT. 12. Applications for service pipes shall be made upon blank forms furnished at the office of the Board; when the estimated cost of the applicant's part has been deposited the pipes shall be laid. From the main to the street line the work shall be done at the expense of the city, the remainder at the cost of the applicant. The account shall be adjusted and any balance paid before the water is turned on.

SECT. 13. Extensions of main pipe shall only be made when authorized by an order of the City Council. Applications therefore must be made upon the blanks furnished by the Board, upon which shall be endorsed the estimate of the cost of the extension desired. No such application shall be considered by the Board unless accompanied by a written agreement, binding the applicant, or other responsible party, to guarantee to the city annually, for at least five years, a sum equal to five per cent of the total cost of the extension. All receipts for water sold from such extension, and no other, shall be credited to the party making such guarantee as payments upon account of same.

Applications for extension of mains through private ways or grounds shall in no case be granted, unless the owner thereof executes a proper instrument, securing to the city the right of permanent occupation, free from any acts of interference that shall affect the safety of the pipe, and securing to the Department free right of entrance for purposes of its inspection and maintenance. Nothing in this section, however, shall be construed as affecting the right of the City Council to authorize the extension of a water main without guaranty, if, upon a vote, taken by yea and nay, two-thirds of the members of each branch present and voting shall vote to do so.

SECT. 14. All bills for water, including the minimum charge for water furnished by meter, shall be payable to the Treasurer, in advance, on the first day of March annually. Bills for specific supplies, or for a part of the year, and fines and penalties, shall be paid before the water is let on. Where water is supplied by meter the excess over minimum rates shall be payable semi-annually, on the first day of March and of September, for the six months next preceding.

SECT. 15. In every case of non payment of the water rent for thirty days after the same is due the Board shall

cause a written demand to be left at the premises where the water is taken; and unless the rent is paid within three days thereafter, together with twenty cents for the demand, the Board shall cut off the supply. The water shall not be let on until the amount due, together with said fee, and two dollars for the shutting off and letting on, is paid, whether other persons taking water through the service pipe are delinquent or not. In every case of non-payment of water rent, the owner of the premises, whether he is the occupant or not, shall be required to pay the same, and all charges connected therewith, provided he has been duly notified of the use of water and has made no objection.

Whenever the water is shut off by request of plumbers for the sake of making repairs, except those named in Section 11, the charge for shutting off and letting on shall be one dollar.

SECT. 16. The annual price or rent to be paid for the use of meters and for water shall be in accordance with the following schedule.

The Board is hereby authorized to make abatements and rebates in all proper cases; no special rates, however, shall be allowed. In any case not provided for by the schedule, the Board shall set a meter and charge for the water at meter rate.

SCHEDULE OF RATES.

Dwelling Houses.

If occupied by one family, one faucet . . .	\$6 00
Each additional faucet, not exceeding two . . .	2 00
One faucet used by two or more families, each family using	4 00
Set wash-tubs, not more than three in a set, each set	1 00

For all other fixtures, the water to be supplied through meters at following rates:

For Consumption Averaging Daily for Six Months.

Under 3,000 gallons per day	(per thousand gal.)	35 cts.
Over 3,000 gal. and under 6 per day	" " "	30 "
" 6,000 " " 10,000	" " "	21 "
" 10,000 " " 20,000	" " "	19 "
" 20,000 " " 30,000	" " "	15 "
30,000 gals. and over per day	" " "	12 "

(Each meter to be subject to a minimum charge of \$10 per annum.)

SECT. 17. Any plumber, or other person, who shall make any alteration in, or any additions to, any water-pipe or fixture, except so far as a written permit therefor has been given by the Board, shall be liable to a fine not exceeding twenty dollars.

SECT. 18. Whoever opens any hydrant, or removes the cap thereof, or opens or makes any connection with the pipe or reservoir, or turns off or on the water in the pipe or reservoir, without the permission of the Board, except in case of fire, shall be liable to a penalty of not less than three nor more than twenty dollars; provided, however, that in case of emergency the water may be turned off by any employee of the city, who shall, in such case, immediately give notice at the office of the Board.

SECT. 19. Whoever, without the authorization of the Board, fishes in the reservoir or filter basin, or discharges any gun or firearm upon the same or on the grounds connected therewith, or bathes therein, or places or uses any boat therein, or posts any bill, placard, or advertisement within the said grounds, shall be liable to a fine of not less than five nor more than fifty dollars for each offense; and the Board is

hereby authorized to exclude the public from any or all grounds of the Department, whenever such exclusion may be deemed by them necessary for the proper protection of the works.

SECT. 20. No water shall be sold to parties outside of the city.

SECT. 21. This amendment shall take effect, in so far as it relates to meters, on March 1st, 1887; in all other respects it shall take effect upon its passage.

RULES AND REGULATIONS

— OF THE —

NEWTON WATER DEPARTMENT.

SECTION 1. OFFICE.

1. The office of the Water Board is hereby established in the room at City Hall now occupied by the Water Registrar.

SECTION 2. ORGANIZATION.

1. Besides the offices of Water Registrar and Superintendent established by ordinance, the permanent organization of the department shall be as follows:—

A Civil Engineer, an Inspector of Meters and Fixtures, a Pumping Engineer, a Fireman, a main-pipe Foreman, a service-pipe Foreman, three Teamsters, and a Clerk in the office of the Water Board. It is understood that the City Engineer is the Civil Engineer of this department.

SECTION 3. WATER REGISTRAR.

1. The Water Registrar shall be the Clerk and Executive Officer of the Board; all orders and communications of the Board shall be signed by, or given through, him and shall be obeyed and respected accordingly.

2. He shall assess the water rates according to the tariff established by ordinance. He shall make out and

distribute bills, exercise a constant supervision over the use of water and attend to the enforcement of all regulations relating thereto.

3. He shall issue the orders of the Board for the laying of main and service pipe only after the requirements of the ordinance shall have been fulfilled; and in no case shall he order an extension in a private way until he has received a certificate from the City Engineer that said way is graded to a proper level.

4. He shall be especially careful to see that the requirement of the ordinance regarding the pre-payment of water rates is strictly enforced and in no event shall he order water turned on till the bill therefor shall have been paid.

5. He shall annually on or before the first day September lay before the Board an estimate in detail of the appropriations required by the department, and of its income, for the next financial year.

6. He shall receive a daily report from the other officers of the department of the progress and condition of the work in their charge and shall make a weekly report to the Board thereupon.

7. He shall keep copies or memoranda of all orders from the office and the reports of other officers closely posted up, and will be held responsible for the proper condition of the books, papers and work of the office, as also for the due performance of the duties imposed upon him by ordinance.

SECTION 4. SUPERINTENDENT.

1. The office of the Superintendent is hereby established at the Pipe Yard at Newtonville.

2. The Superintendent shall have general charge of the out-of-door work. No new work shall be undertaken by him without the order of the Board; any work of main-

tenance, however, necessary to be performed without delay, may be done without said order, the Superintendent immediately reporting thereon to the Registrar.

3. He shall have control of the laborers and other employees engaged upon work under his charge. He shall have power to hire and discharge day laborers and to suspend any other of his employees, giving immediate notice of such suspension to the Board, for its action.

4. He will be held responsible for the good conduct of the men under his direction, the condition of the water, of the reservoir and its grounds, of the grounds about the Pumping Station, the basin and grounds in Needham, the piping, gates, hydrants and other appurtenances of the department plant, and all tools and property at the Pipe Yard.

5. He will be watchful to prevent or remedy any defect in a street or sidewalk resulting from the presence of main or service pipe or their appurtenances.

6. Before leaving his office he will report to the Water office where he may be found while absent, and the time of his expected return.

7. He shall make daily reports to the Water Registrar of the progress and condition of work in his charge

SECTION 5. INSPECTOR.

1. The Inspector, under the charge of the Registrar, shall make inspections of the fixtures and meters in service at such times as the Registrar shall deem expedient, and he shall, in general, act as chief assistant to the Registrar.

2. He shall have charge of testing, setting and repairing meters and shall keep careful record of the dates and results of all tests made; of the condition of all meters removed for repairs, both before and after repairs are made, with the date of their removal and resetting. He shall also

keep a careful record of the cost of setting, repairing, inspecting and renewing all meters and a record showing the work performed by all meters from the date of setting, with the annual and aggregate expense of their maintenance, computed both per meter and per 100,000 feet of water registered.

3. He shall make daily reports to the Water Registrar of the condition and progress of the work under his charge.

SECTION 6. ENGINEER.

1. Upon receipt of orders therefor from the Board, the City Engineer shall, within twenty-four hours, establish lines and grades for the extension of all water-mains and shall take such measurements of main and service pipe extensions, and their appurtenances, as will enable him to correctly locate and plat the same; he shall keep the returns from the Pumping Engineer closely posted up and shall plat therefrom a diagram showing the engine duty.

2. He shall make a daily report to the Water Registrar of the progress and condition of the work under his charge.

3. He shall perform such other duties as the Board may from time to time by vote require of him.

SECTION 7. PUMPING ENGINEER.

1. The Pumping Engineer shall be held responsible for the good condition of the pumping station, machinery, fixtures, furniture, tools, and other property of the Department therein contained.

2. It shall be his personal duty to keep the engines, pumps and engine-room in a neat and proper condition.

3. He shall be entitled to one day's leave of absence in each week, provided such absence will not interfere with the proper prosecution of the work of the Department, but he shall not absent himself from the pumping station or its

immediate vicinity without permission asked and obtained from the water office.

4. He shall keep, closely posted up, the book of record of the pumping engine, which will be furnished him.

5. He shall make a daily report to the Water Registrar of the height of water in the well and river; the quantity of water pumped and of coal consumed, and of the general condition of the pumping station and of the work under his charge. He shall also make weekly reports to the City Engineer of the engine record, upon blanks to be furnished him.

SECTION 8. FIREMAN.

1. The fireman shall, under the supervision of the Pumping Engineer, attend to the firing of the boilers and perform all work incidental thereto; it shall be his personal duty to keep the boilers, furnaces, boiler-room, coal-room, and other adjuncts to the boiler-room in a neat and proper condition.

2. He shall not absent himself from the pumping station without permission of the Pumping Engineer but shall be entitled to one day's leave of absence in each week when such absence will not interfere with the proper performance of his duties.

3. He shall keep a careful record of the amount of coal used and the purpose of its use.

SECTION 9. EMPLOYEES.

1. The Foremen of main and service-pipe and two of the teamsters shall at all times be under the direction of the Superintendent; the other teamster shall be also under the direction of the Superintendent at such times as his services are not required by the Inspector. The Clerk in the water

board office shall be under the direction of the Water Registrar.

SECTION 10. GENERAL RULES.

1. The matter of employment and discharge of other assistance than labor shall be exercised only by the Board.

2. The Board shall establish the compensation of all employees of the department, under the ordinance, and no change in compensation of any employee shall be made without the consent of the Board.

3. No expenditure whatever shall be incurred by any employee of the department without authority therefor from the Board.

4. The Board desires that it shall be distinctly understood by all employees that the department expects, in return for the pay attached to their several positions, the whole of their time and the best of their ability. No extra pay for work directly connected with their duties will be allowed to persons whose pay is fixed by the month or year, and no absence from duty without leave will be permitted.

CITY OF NEWTON.

AUDITOR'S ANNUAL REPORT

OF THE

FINANCES

OF THE

CITY OF NEWTON,

FOR THE

YEAR ENDING DEC. 31, 1886

No. CCVIII.



NEWTON:

PRESS OF THE NEWTON JOURNAL.

1887.

CONTENTS.

City Government, 1886	- - - - -	vi-xx
Duties of the Auditor of Accounts	- - - - -	1
Auditor's Report	- - - - -	3
City Treasurer's Account	- - - - -	5
Report of Committee on Finance	- - - - -	9-10
Liabilities	- - - - -	10-12
Assets and Recapitulation	- - - - -	12-16
Receipts	- - - - -	16-18
Expenses	- - - - -	18-20
Table showing Appropriations, Transfers, Mayor's War- rants, etc.	- - - - -	21-23
Table showing Permanent Debt	- - - - -	24
Statement of Kenrick Fund	- - - - -	25
Taxes and Taxable Valuation	- - - - -	25
Ledger Balances	- - - - -	26
Report of Commissioners of Sinking Funds	- - - - -	27-30
Report of the Trustees of the Read Fund	- - - - -	31
Detailed Statement of Receipts and Expenditures	- - - - -	31-50

RECEIPTS.

Almshouse	- - - - -	31-49
Armory	- - - - -	32
Betterments	- - - - -	32
City Hall	- - - - -	32-33
Collector's Fees	- - - - -	33
Corporation Tax	- - - - -	33
Dog Tax	- - - - -	33
Drains and Culverts	- - - - -	33
Druggists' License Fees	- - - - -	34
Funded Debts—Water Bonds	- - - - -	34-35
Funded Debt—Public Library Loan	- - - - -	35
Funded Debt—High School Loan	- - - - -	35
Gravel Land	- - - - -	36

Highway Department	- - - - -	36-38
Interest on Farlow Park Betterments	- - - - -	38
Interest on Deposits	- - - - -	39
Interest on Taxes	- - - - -	39
Interest on City Loans	- - - - -	39
Interest on Water Bonds	- - - - -	39-40
Interest on Real Estate Tax Title	- - - - -	40
Indigent Soldiers and Sailors	- - - - -	40
Kenrick Fund Income	- - - - -	41
Miscellaneous	- - - - -	41
National Bank Tax	- - - - -	41
Newton Free Library	- - - - -	42
Police Department	- - - - -	42
Poor out of Almshouse	- - - - -	42
Peddlars' Licenses	- - - - -	44
Parks and Squares	- - - - -	44
Public Property	- - - - -	44
Record and Other Fees	- - - - -	45
Real Estate Tax Title	- - - - -	45
Read Fund Income	- - - - -	45
School Incidentals	- - - - -	45
Ships Engaged in Foreign Trade	- - - - -	45
Sinking Fund Commissioners	- - - - -	46
Sidewalks and Curbing	- - - - -	46
State Aid	- - - - -	46
Suspense Account	- - - - -	46
Taxes, 1883 to 1887	- - - - -	46-47
Tuition for Non-Resident Pupils	- - - - -	47
Temporary Loans	- - - - -	48
Water Maintenance	- - - - -	49
Water Meters and Service-Pipes	- - - - -	49
Water-Rates	- - - - -	49
Water-Rates by Meters	- - - - -	49
Water Department	- - - - -	49
Water Construction	- - - - -	166

EXPENDITURES.

Almshouse	- - - - -	50-52
Armory expenses	- - - - -	53
Auburndale Williams Schoolhouse	- - - - -	53
Auburndale Sub-way	- - - - -	53
Books, Stationery and Printing	- - - - -	54-55

CONTENTS.

v

Board of Health - - - - -	55-56
Burial-Grounds - - - - -	56
Conveyance of Pupils - - - - -	57
Curbing - - - - -	57
City Hall - - - - -	57-58
City Engineer's Department - - - - -	59-60
Drains and Culverts - - - - -	60-62
Evening Schools - - - - -	62-63
Fire Department - - - - -	63-79
Funded Debt - - - - -	79
Funded Debt, Schoolhouse Note - - - - -	79
Gravel Land - - - - -	80
Highways, General Repairs - - - - -	80-90
Highways, Widening, Reconstruction and Improvements	92
Interest on City Loans, permanent - - - - -	92-93
Interest on City Loans, temporary - - - - -	93-94
Interest on Water Bonds - - - - -	94
Indigent Soldiers and Sailors - - - - -	94-95
Land Damages - - - - -	95
Memorial Day - - - - -	96
Miscellaneous Expenses - - - - -	96-110
Newton Free Library - - - - -	110-113
Newton Free Library Addition - - - - -	114
Parks and Squares - - - - -	114-115
Police Department - - - - -	115-119
Poor out of Almshouse - - - - -	119-125
Poor out of Almshouse, Commonwealth of Massachusetts	125
Public Property - - - - -	125-132
Removal of Ashes - - - - -	132
Read Fund Income - - - - -	133
Salaries - - - - -	133-134
Schools, General Appropriation for - - - - -	134-142
Schools, Enlargement of High School Building - - - - -	142
Schools, Incidentals - - - - -	142-149
Sidewalks and Street Crossings - - - - -	149
Sinking Fund, City Debt - - - - -	149
Sinking Fund, School Loan - - - - -	150
Sinking Fund, Water Bonds - - - - -	150
Sinking Fund, Public Park Loan - - - - -	150
State Aid - - - - -	150-151
Street Light Department - - - - -	151-152
Suspense Account - - - - -	153

Taxes, County, Corporation, National Bank, State	- -	153
Temporary Loans	- - - - -	154
Use of Hydrants	- - - - -	154
Underwood Schoolhouse, improvement of	- - - -	155
Water Maintenance	- - - - -	155-159
Water Meters and Service Pipe	- - - - -	159-161
Water Rebate	- - - - -	161
Water Construction	- - - - -	161-166
Schedule of City Property, Real and Personal	- - -	166-172
Table showing the Number of Polls, Real and Personal Estate, etc.	- - - - -	173
Table showing Amount paid for Support of Poor out of Almshouse, from 1851 to 1886 inclusive	- - - -	174
Salaries of City Officers, 1886	- - - - -	174-177
City Government, 1887	- - - - -	179
City Clerk's Statement of Births, Marriages and Deaths, Fees, Dogs	- - - - -	187

OFFICERS
OF THE
NEWTON CITY GOVERNMENT,
1886.

MAYOR.

J. WESLEY KIMBALL.

BOARD OF ALDERMEN.

GEORGE PETTEE, *President*.

Ward One.

FRANK A. DEARBORN.

Ward Two.

BENJAMIN S. GRANT.

Ward Three.

JAMES H. NICKERSON.

Ward Four.

GEORGE M. FISKE.

Ward Five.

GEORGE PETTEE.

Ward Six.

EDWARD H. MASON.

Ward Seven.

SAMUEL L. POWERS.

Clerk of Board of Aldermen.

ISAAC F. KINGSBURY.

COMMON COUNCIL.

JAMES W. FRENCH, *President*.

Ward One.

LEWIS E. COFFIN.

J. EDWARD HOLLIS.

Ward Two.

N. HENRY CHADWICK.

ELLIS W. REDPATH.

Ward Three.

GEORGE D. DIX.

ANDREW J. FISKE.

Ward Four.

WINTHROP B. ATHERTON.

FREDERICK JOHNSON.

Ward Five.

EDMUND G. POND.

EDWARD M. BILLINGS.

Ward Six.

FRANK EDMANDS.

CHARLES W. ROSS.

Ward Seven.

JAMES W. FRENCH.

J. CHARLES KENNEDY.

Clerk of Common Council.

ALBERT S. GLOVER.

City Clerk.

ISAAC F. KINGSBURY.

City Treasurer and Collector of Taxes.

JOHN A. KENRICK.

Deputy Collector.

MOSES CLARK, JR.

City Auditor.

BENJAMIN F. OTIS.

City Solicitor.

WINFIELD S. SLOCUM.

City Engineer.

ALBERT F. NOYES.

Superintendent of Streets.

WILLIAM E. FULLER.

Water Registrar.

ALBERT S. GLOVER.

Superintendent of Water Works

H. N. HYDE, JR.

Agent of the Board of Health.

NATHAN MOSMAN.

City Messenger.

JOSEPH D. WELLINGTON.

ASSESSORS' DEPARTMENT.

Assessors.

ISAAC HAGAR, Chairman	-	-	Term expires January, 1889
HOWARD B. COFFIN, Secretary	-	"	" " " 1887
SAMUEL M. JACKSON	-	-	" " " 1888

Assistant Assessors (Elected Annually.)

Ward 1.—DEXTER WHIPPLE.*	Ward 4.—RUFUS MOULTON.
Ward 2.—A. A. SAVAGE.	Ward 5.—WILLIAM E. CLARKE.
Ward 3.—GEORGE E. ALLEN.	Ward 6.—GEORGE WARREN.
	Ward 7.—JOHN WARNER.

SCHOOL COMMITTEE.

HON. J. WESLEY KIMBALL, Mayor, Chairman ex-officio.
 JAMES W. FRENCH, President Common Council ex-officio.
 FISHER AMES, Chairman.
 THOMAS EMERSON, Secretary.
 THOMAS EMERSON, Superintendent.

Elective Members.

Present Term of Office.

Ward 1.—EDMUND W. CONVERSE	-	Expires January, 1889
CHARLES H. STONE	-	" " 1889
Ward 2.—JOHN W. DICKINSON	-	" " 1889
A. AMELIA SMEAD	-	" " 1889
Ward 3.—GEORGE A. WALTON	-	" " 1888
FISHER AMES	-	" " 1888
Ward 4.—WILLIAM S. SMITH	-	" " 1888
ISAAC HAGAR	-	" " 1888
Ward 5.—JOHN A. GOULD	-	" " 1887
ALBERT B. PUTNEY	-	" " 1887
Ward 6.—CHARLES C. BARTON	-	" " 1887
WILLIAM D. PHILBRICK	-	" " 1887
Ward 7.—GEORGE W. SHINN	-	" " 1887
ALONZO S. WEED	-	" " 1888

*Deceased August 14. Edwin O. Childs elected to fill vacancy September 27.

CITY GOVERNMENT.

District Committees.

NEWTON CENTRE DISTRICT.

CHARLES C. BARTON	-	-	-	-	Newton Centre.
WILLIAM D. PHILBRICK	-	-	-	-	Newton Centre.
JOHN A. GOULD	-	-	-	-	Newton Upper Falls.
ALBERT B. PUTNEY	-	-	-	-	Newton Highlands.
JAMES W. FRENCH	-	-	-	-	Newton.

UPPER FALLS DISTRICT.

JOHN A. GOULD	-	-	-	-	Newton Upper Falls.
ALBERT B. PUTNEY	-	-	-	-	Newton Highlands.
ISAAC HAGAR	-	-	-	-	Newton Lower Falls.
WILLIAM D. PHILBRICK	-	-	-	-	Newton Centre.
CHARLES C. BARTON	-	-	-	-	Newton Centre.

AUBURNDALE AND LOWER FALLS.

WILLIAM S. SMITH	-	-	-	-	Auburndale.
FISHER AMES	-	-	-	-	West Newton.
ISAAC HAGAR	-	-	-	-	Newton Lower Falls.
GEORGE A. WALTON	-	-	-	-	West Newton.
JOHN A. GOULD	-	-	-	-	Newton Upper Falls.

WEST NEWTON DISTRICT.

FISHER AMES	-	-	-	-	West Newton.
J. W. DICKINSON	-	-	-	-	Newtonville.
GEORGE A. WALTON	-	-	-	-	West Newton.
WILLIAM S. SMITH	-	-	-	-	Auburndale.
A. AMELIA SMEAD	-	-	-	-	Newtonville.

NEWTONVILLE DISTRICT.

J. W. DICKINSON	-	-	-	-	Newtonville.
A. AMELIA SMEAD	-	-	-	-	Newtonville.
ALONZO S. WEED	-	-	-	-	Newton.
EDMUND W. CONVERSE	-	-	-	-	Newton.
CHARLES H. STONE	-	-	-	-	Newton.

NEWTON DISTRICT.

GEORGE W. SHINN	-	-	-	-	Newton.
CHARLES H. STONE	-	-	-	-	Newton.
ALONZO S. WEED	-	-	-	-	Newton.
EDMUND W. CONVERSE	-	-	-	-	Newton.
JAMES W. FRENCH	-	-	-	-	Newton.

Standing Committees of the Board.

HIGH SCHOOL.

FISHER AMES.	GEORGE W. SHINN.
J. W. DICKINSON.	EDMUND W. CONVERSE.
WILLIAM S. SMITH.	CHARLES C. BARTON.
WILLIAM D. PHILBRICK.	THE MAYOR, ex-officio.

EVENING SCHOOLS.

GEORGE W. SHINN.	ALONZO S. WEED.
GEORGE A. WALTON.	

MUSIC.

GEORGE W. SHINN.	A. AMELIA SMEAD.
EDMUND W. CONVERSE.	

DRAWING AND WRITING.

A. AMELIA SMEAD.	CHARLES H. STONE.
ALBERT B. PUTNEY.	

INDUSTRIAL DRAWING.

JOHN A. GOULD.	CHARLES H. STONE.
JAMES W. FRENCH.	

SEWING.

A. AMELIA SMEAD.	GEORGE W. SHINN.
WILLIAM D. PHILBRICK.	

TEXT-BOOKS.

CHARLES C. BARTON.	WILLIAM S. SMITH.
ALONZO S. WEED.	

RULES AND REGULATIONS.

WILLIAM S. SMITH.	ALONZO S. WEED.
GEORGE A. WALTON.	

SALARIES.

EDMUND W. CONVERSE.	JAMES W. FRENCH.
JOHN W. DICKINSON.	

CITY GOVERNMENT.

SCHOOLHOUSES.

ISAAC HAGAR.

CHARLES H. STONE.

JOHN W. DICKINSON.

ACCOUNTS AND PRINTING.

ISAAC HAGAR.

FISHER AMES.

GEORGE A. WALTON.

WATER BOARD.

At Large.

EDWARD W. CATE, President.

FRANCIS A. DEWSON.

CHARLES FRED CREHORE.

From the Board of Aldermen.

GEORGE PETTEE.

From the Common Council.

GEO D. DIX.

ALBERT S. GLOVER, Clerk.

POOR DEPARTMENT.

Board of Overseers.

THE MAYOR, ex-officio, Chairman.

Ward 1—DEXTER WHIPPLE.* Ward 4—NATHAN MOSMAN.

Ward 2—EDWARD S. COLTON, Ward 5—HOSEA C. HOYT.

Ward 3—GEORGE H. INGRAHAM. Ward 6—GEORGE WARREN.

Ward 7—JOHN WARNER.

NATHAN MOSMAN, City Almoner.

NATHAN MOSMAN, Clerk of Board.

NATHANIEL D. MOODY, Warden of Almshouse.

MRS. ELIZA A. MOODY, Matron.

*Deceased Aug. 14. Edwin O. Childs elected to fill vacancy Sept. 27.

BOARD OF HEALTH.

THE MAYOR, ex-officio.

From the Board of Aldermen.

BENJAMIN S. GRANT, President.

From the Common Council.

FRANK EDMANDS,

At Large.

J. FRANKLIN FULLER.

JESSE F. FRISBIE.

OTIS PETTEE.

Agent of Board.

NATHAN MOSMAN.

Clerk.

ISAAC F. KINGSBURY.

Agent for Inspection of Plumbing.

ALBERT F. NOYES.

FIRE DEPARTMENT.

HENRY L. BIXBY, Chief of Department.

WALTER B. RANDLETT,

Assistant Chief of Department and Fire Alarm Telegraph Operator.

TRUSTEES OF PUBLIC LIBRARY.

At Large.

JOHN S. FARLOW, President.

B. K. PIERCE, Superintendent

WILLIAM CLAFLIN.

A. LAWRENCE EDMANDS.

JULIUS L. CLARKE.

From the Board of Aldermen.

GEORGE M. FISKE.

From the Common Council.

ELLIS W. REDPATH.

HANNAH P. JAMES, Librarian.

CITY GOVERNMENT.

Sinking Fund Commissioners and Trustees of the Read Fund.

GEORGE S. BULLENS, Chairman.

ALDEN SPEARE.

GEORGE C. LORD.

BENJAMIN F. OTIS, Secretary.

Registrars of Voters.

GEORGE E. BRIDGES, Chairman.

ISAAC F. KINGSBURY, Clerk.

GEORGE H. BOURNE.

RICHARD T. SULLIVAN.

CIVIL SERVICE EXAMINERS.

LUCIUS G. PRATT, Chairman.

*EZRA S. FARNSWORTH, Secretary.

ARTHUR W. POPE.

POLICE DEPARTMENT.

DANIEL M. HAMMOND, City Marshal.

CHARLES F. RICHARDSON, Sergeant of Police.

Police Officers.

JAMES D. HENTHORN.

CHARLES P. HEUSTIS.

WILLIAM C. EMERSON.

ROBERT S. HARRISON.

NOAH F. BOSWORTH.

CHARLES E. DAVIS.

GEORGE E. F. BAKER.

FRANK B. FLETCHER.

CHARLES O. DAVIS.

JOHN PURCILL.

EDSON C. HOLMES.

RUFUS H. MOULTON.

JOHN RYAN.

W. G. BOSWORTH.

JOHN W. CONROY, Jr.

AMBROSE M. FULLER.

CHARLES T. BARTLETT.

THOMAS C. CLAY.

ELECTION OFFICERS 1886.

Ward One.

Warden R. ORLANDO EVANS.

Deputy Warden EDWIN A. SMALLWOOD.

Clerk SETH C. STEVENS.

Deputy Clerk GEORGE R. ASTON.

Inspector FRED H. STONE.

Inspector MICHAEL HURLEY.

Deputy Inspector ALBERT P. BUGBEE.

Deputy Inspector CHARLES H. STUART.

*Died April 2, 1886. Henry C. Hayden appointed to fill vacancy.

Ward Two.

Warden	HENRY P. DEARBORN.
Deputy Warden	JOHN F. PAYNE.
Clerk	WILLARD S. HIGGINS.
Deputy Clerk	ALFRED B. TAINTER.
Inspector	LAWRENCE H. CRANITCH.
Inspector	JAMES D. BILLINGS.
Deputy Inspector	J. H. WILLIAMS.
Deputy Inspector	WILLIAM C. GAUDELET.

Ward Three.

Warden	HARVEY C. WOOD.
Deputy Warden	FRANK E. HUNTER.
Clerk	EDWARD S. MERCHANT.
Deputy Clerk	FRANCIS T. COX.
Inspector	ARTHUR R. COE.
Inspector	CHARLES F. TUTTLE.
Deputy Inspector	EDWARD L. LEMON.
Deputy Inspector	F. H. HUMPHREY.

Ward Four.

Warden	GEORGE E. JOHNSON.
Deputy Warden	BERNARD EARLY.
Clerk	HENRY H. MATHER.
Deputy Clerk	G. LYMAN SNOW.
Inspector	HENRY WASHBURN.
Inspector	GEORGE W. CHAMBERLAIN.
Deputy Inspector	WILLIAM A. LEONARD.
Deputy Inspector	BENJAMIN B. CLARK.

Ward Five.

Warden	ALBERT J. GROVER.
Deputy Warden	JOHN W. HOWE.
Clerk	CHARLES H. HALE.
Deputy Clerk	G. H. OSBORNE.
Inspector	WILLIAM T. LOGAN.
Inspector	PHILIP T. BEGLEY.
Deputy Inspector	JOHN P. TENNEY.
Deputy Inspector . . . . .	.

Ward Six.

Warden	SAMUEL M. JACKSON.
Deputy Warden	WILLIAM F. WOODMAN.
Clerk	ROBERT R. BISHOP, JR.
Deputy Clerk	STEPHEN BARTLETT.
Inspector	JAMES W. HILL.
Inspector	HENRY H. READ.
Deputy Inspector	GEO. F. RICHARDSON.
Deputy Inspector	B. W. CROCKER.

Ward Seven.

Warden	J. EDWIN WARNER.
Deputy Warden	CHARLES W. BASSETT.
Clerk	MOSES CLARK, JR.
Deputy Clerk	HENRY C. DANIELS.
Inspector	GEORGE W. LAMSON.
Inspector	GEORGE S. WOODBRIDGE.
Deputy Inspector	BENJAMIN S. WETHERBEE.
Deputy Inspector	LEWIS H. FARLOW.

JOINT STANDING COMMITTEES OF THE CITY COUNCIL.

Committee on Finance and Salaries.

ALDERMEN.

BENJAMIN S. GRANT. SAMUEL L. POWERS
PRESIDENT JAMES W. FRENCH.

COUNCILMEN.

FREDERICK JOHNSON. J. EDWARD HOLLIS

Committee on Accounts.

ALDERMEN.

FRANK A. DEARBORN. GEORGE M. FISKE.

COUNCILMEN.

ANDREW J. FISKE. ELLIS W. REDPATH.
EDMUND G. POND.

Committee on Public Property.

ALDERMEN.

BENJAMIN S. GRANT.

EDWARD H. MASON.

COUNCILMEN.

WINTHROP B. ATHERTON.

J. CHARLES KENNEDY.

EDWARD M. BILLINGS.

Committee on State Aid, Soldiers' Relief and Military Affairs.

ALDERMEN.

GEORGE M. FISKE.

FRANK A. DEARBORN.

COUNCILMEN.

ANDREW J. FISKE.

EDMUND G. POND.

J. CHARLES KENNEDY.

Committee on Fuel and Street Lights.

ALDERMEN.

SAMUEL L. POWERS.

JAMES H. NICKERSON.

COUNCILMEN.

FRANK EDMANDS.

EDWARD M. BILLINGS.

ELLIS W. REDPATH.

Committee on Fire Department.

ALDERMEN.

GEORGE PETTEE.

SAMUEL L. POWERS.

COUNCILMEN.

WINEHROP B. ATHERTON.

FRANK EDMANDS.

ANDREW J. FISKE.

Committee on Highways, Streets and Ways, Sidewalks, Drains and Sewers.

ALDERMEN.

JAMES H. NICKERSON.

GEORGE M. FISKE.

GEORGE PETTEE.

COUNCILMEN.

CHARLES W. ROSS.

N. HENRY CHADWICK.

LEWIS E. COFFIN.

J. CHARLES KENNEDY.

CITY GOVERNMENT.

Committee on Printing.

ALDERMAN.

EDWARD H. MASON.

COUNCILMEN.

WINTHROP B. ATHERTON.

EDWARD M. BILLINGS.

Committee on Ordinances.

ALDERMEN.

BENJAMIN S. GRANT.

EDWARD H. MASON.

COUNCILMEN.

ANDREW J. FISKE.

FREDERICK JOHNSON.

LEWIS E. COFFIN.

Committee on Claims.

ALDERMEN.

EDWARD H. MASON.

SAMUEL L. POWERS.

COUNCILMEN.

PRESIDENT JAMES W. FRENCH.

GEORGE D. DIX.

J. EDWARD HOLLIS.

Committee on Almshouse and Poor.

ALDERMAN.

GEORGE PETTEE.

COUNCILMEN.

GEORGE D. DIX.

CHARLES W. ROSS.

Committee on Assessors' Department.

ALDERMAN.

JAMES H. NICKERSON.

COUNCILMEN.

EDMUND G. POND.

N. HENRY CHADWICK.

Highway Surveyors.

ALDERMEN.

JAMES H. NICKERSON.

GEORGE M. FISKE.

GEORGE PETTEE.

COUNCILMEN.

CHARLES W. ROSS.

N. HENRY CHADWICK.

LEWIS E. COFFIN.

J. CHARLES KENNEDY.

CITY GOVERNMENT.

xix

Committee on Parks, Squares and Burial Grounds.

ALDERMEN.

GEORGE PETTEE.

SAMUEL L. POWERS.

FRANK A. DEARBORN.

COUNCILMEN.

FRANK EDMANDS.

GEORGE D. DIX.

ELLIS W. REDPATH.

FREDERICK JOHNSON.

JOINT SPECIAL COMMITTEES.

Sewerage.

ALDERMEN.

EDWARD H. MASON.

GEORGE M. FISKE.

COUNCILMEN.

ANDREW J. FISKE.

N. HENRY CHADWICK.

LEWIS E. COFFIN.

Rules and Orders.

ALDERMEN.

BENJAMIN S. GRANT.

EDWARD H. MASON.

COUNCILMEN.

EDWARD M. BILLINGS.

WINTHROP B. ATHERTON.

CHARLES W. ROSS.

Read Fund.

ALDERMEN.

FRANK A. DEARBORN.

SAMUEL L. POWERS.

COUNCILMEN.

PRES. JAMES W. FRENCH.

J. CHARLES KENNEDY.

J. EDWARD HOLLIS.

LEWIS E. COFFIN.

CITY GOVERNMENT.

STANDING COMMITTEE.
BOARD OF MAYOR AND ALDERMEN.

Committee on Police.

THE MAYOR.

EDWARD H. MASON.

FRANK A. DEARBORN.

Committee on Licenses, Weights and Measures.

ALDERMEN.

GEORGE M. FISKE.

SAMUEL L. POWERS.

Committee on Elections.

ALDERMEN.

GEORGE PETTEE.

JAMES H. NICKERSON.

STANDING COMMITTEE, BOARD OF ALDERMEN.

Committee on Enrolled Ordinances and Resolutions.

ALDERMEN.

BENJAMIN S. GRANT.

EDWARD H. MASON.

STANDING COMMITTEE OF THE COMMON COUNCIL.

Committee on Enrolled Ordinances and Resolutions.

COUNCILMEN.

ANDREW J. FISKE.

EDMUND G. POND.

LEWIS E. COFFIN.

Clerk of Committees.

BENJAMIN F. OTIS.

DUTIES OF THE AUDITOR OF ACCOUNTS.

The following are the important provisions of the Ordinance setting forth the duties of the City Auditor:

The Auditor shall receive all accounts and claims against the City, after the same shall have been certified by the Committee, or the proper certifying officers authorized on behalf of the City to make the contract, or cause the expenditure to be made. He shall carefully examine all such accounts and claims, see that they are correctly cast and duly authorized by the City Council or its order, and having certified to the same, shall present them properly filed and labelled to the Committee on Accounts.

The Auditor shall act as Clerk of the several standing and joint standing committees, and as secretary of the Sinking Fund Commissioners, and Trustees of the Read Fund without extra compensation.

The Auditor, on or before the first day of March annually, shall make a report to the City Council of the receipts and expenditures of the past financial year, in detail, and shall give, in his report, a schedule of the property of the City and of leases thereof, and an exhibit of the loans or debts, bearing interest, due from the City, the rates of interest, and the time when payable. He shall each month transmit to the Mayor, and each member of the City Council, a statement showing the amounts expended and unexpended of each appropriation.

AUDITOR'S REPORT.

CITY OF NEWTON.

AUDITOR'S DEPARTMENT,

MARCH 1, 1887.

To the Honorable City Council:

GENTLEMEN, — In conformity with the requirements of the several sections of the City Ordinances, I have the honor to present herewith the Annual Report of the receipts and expenditures of the City of Newton for the financial year commencing Jan. 1, and terminating Dec. 31, 1886, with a detailed account of each department, a statement of the liabilities and assets, a table showing the funded debt, the rates of interest, and times the notes and bonds are payable, another showing appropriations, Mayor's drafts, treasurer's payments and balances, a statement of the Sinking Funds, and of the Read Fund, a summary statement of receipts and expenditures for the year, a statistical table, showing the number of Polls, Real and Personal Estate, Town, City, County and State Taxes, Rate of Taxation, Appropriations, etc., with the number of houses from year to year, for twenty-six consecutive years. Among the remaining tabulations will be found a schedule of the City property so arranged as to show in separate classification the property belonging to the Almshouse, Fire, Highway, School, and other Departments. In addition to these, is also given such other information appertaining to the fiscal interests of the City as may possess general interest.

Very Respectfully,

BENJAMIN F. OTIS,

Auditor.

CITY OF NEWTON, DECEMBER 31, 1886.

To the Honorable Mayor and City Council :

GENTLEMEN,—In accordance with Section 11, Ordinance 4, I have the honor to lay before you the statement of the Receipts and Expenditures of the Treasury Department for the year ending December 31, 1886.

Very respectfully yours,

JOHN A. KENRICK,

Treasurer and Collector.

CITY TREASURER'S ACCOUNT.

City of Newton in Account with JOHN A. KENRICK, Treasurer and Collector.

DR.

Almshouse, expenses and repairs	\$3,626 58
Armory rent and expenses	947 26
Auburndale school house	779 67
Auburndale tunnel	6,560 92
Books, stationery and printing	2,652 37
Board of Health	2,872 06
Burial grounds	393 75
Conveyance of pupils	805 00
Curbing	1,500 00
City hall expenses	2,187 23
County tax	14,934 33
Corporation tax	26 15
City engineer's department	7,223 70
Drains and culverts	13,937 35
Evening schools	527 83
Fire department	26,823 98
Funded debt, 6 per cent. note paid . .	20,000 00
Funded debt, 4 per cent. school loan, note paid,	5,150 00

Amount carried forward, \$110,948 18

<i>Amount brought forward,</i>	.	.	.	.	\$110,948 18
Gravel land	.	.	.	.	1,257 32
Highways, general repairs	.	.	.	.	72,209 49
Highways, widenings and improvements	.	.	.	.	21,013 36
Improvements on public squares	.	.	.	.	2,592 50
Interest on city loans	.	.	.	.	19,270 17
Interest on temporary loans	.	.	.	.	5,066 35
Interest on water bonds	.	.	.	.	54,380 00
Indigent soldiers and sailors	.	.	.	.	921 00
Kenrick Fund	.	.	.	.	136 70
Land damage	.	.	.	.	2,467 50
Memorial day	.	.	.	.	400 00
Miscellaneous expenses	.	.	.	.	17,986 86
Newton free library	.	.	.	.	8,840 51
Newton free library, extension	.	.	.	.	12,400 00
Newton High School, extension	.	.	.	.	29,400 00
National bank tax	.	.	.	.	922 51
Overlay of year 1884	.	.	.	.	310 46
Overlay of year 1885	.	.	.	.	544 64
Overlay of year 1886	.	.	.	.	3,233 65
Police department	.	.	.	.	22,321 50
Poor out of almshouse	.	.	.	.	7,893 10
Poor out of almshouse, Commonwealth of Mass	.	.	.	.	5 72
Public property	.	.	.	.	13,319 90
Removal of ashes	.	.	.	.	3,302 63
Read Fund	.	.	.	.	1,452 74
Salaries	.	.	.	.	15,597 04
Schools	.	.	.	.	96,937 43
School incidentals	.	.	.	.	15,597 76
Sidewalks	.	.	.	.	10,662 60
Sinking fund, city debt	.	.	.	.	21,500 00
<i>Amount carried forward,</i>	.	.	.	.	\$572,891 62

<i>Amount brought forward,</i>	.	.	.	.	\$572,891 62
Sinking fund, school loan	.	.	.	.	4,500 00
Sinking fund, water debt	.	.	.	.	18,000 00
Sinking fund, public park loan	.	.	.	.	852 90
State tax	.	.	.	.	24,840 00
Street lights	.	.	.	.	25,066 66
State aid	.	.	.	.	1,041 95
Suspense account	.	.	.	.	1 75
Temporary loans	.	.	.	.	319,700 00
Underwood school house	.	.	.	.	4,100 00
Use of hydrants	.	.	.	.	8,940 00
Water maintenance	.	.	.	.	13,949 50
Water maintenance, meters and service pipe	.	.	.	.	6,611 66
Water rebate	.	.	.	.	351 07
Water construction	.	.	.	.	43,196 69
Balance in the treasury December 31st, 1886,					44,638 22
					<hr/>
					\$1,088,682 02
					<hr/>

CR.

Balance in treasury, December 31st, 1885,	.	\$55,218 93
Almshouse	.	2,222 20
Armory	.	749 27
Betterments, Newtonville drain	.	72 80
Betterments, Murray street	.	275 00
Betterments, Farlow park	.	1,381 77
City Hall	.	875 00
Collector's fees	.	250 97
Corporation tax	.	40,853 30
Dog tax	.	2,081 23
Drains and culverts	.	403 75
		<hr/>
<i>Amount carried forward,</i>	.	\$104,384 22

<i>Amount brought forward,</i>	\$104,384 22
Druggists' license	17 00
Gravel land	805 80
Foreign ships	2,471 02
Highways	6,717 69
Interest on Farlow park betterments	130 38
Interest on bank deposits	503 76
Interest on taxes	1,895 43
Interest on city loans	5 00
Interest on water scrip	226 66
Funded debt, 4 per cent. water scrip	34,000 00
Funded debt, 3 1-2 per cent. library loan	23,000 00
Funded debt, 3 1-2 per cent. high school loan,	55,000 00
Indigent soldiers and sailors	476 50
Police	768 16
Poor out of almshouse	1,530 87
Pedlars' licenses	22 00
Public squares	61 50
Public property	355 00
Miscellaneous	42 31
National bank tax	11,045 23
Newton free library, catalogue account	13 00
Interest on real estate tax titles	121 81
Kenrick Fund	108 67
Record and other fees	280 20
Real estate tax titles	622 06
Read Fund	2,419 25
Sinking fund commissioners (to pay note)	20,000 00
Sidewalks and curbing	683 55
School incidentals	33 64
State aid	915 00
Suspense account	118 12
<i>Amount carried forward,</i>	<u>\$268,773 83</u>

<i>Amount brought forward,</i>	.	.	.	.	\$268,773 83
Taxes of year 1882	.	.	.	.	2 00
Taxes of year 1883	.	.	.	.	20 69
Taxes of year 1884	.	.	.	.	919 54
Taxes of year 1885	.	.	.	.	62,054 94
Taxes of year 1886	.	.	.	.	380,095 01
Tuition of non resident pupils	.	.	.	.	806 50
Temporary loans	.	.	.	.	314,400 00
Water maintenance, meters and service	.	.	.	.	6,311 50
Water maintenance	.	.	.	.	6 00
Water rates	.	.	.	.	34,213 63
Water, rent of meters	.	.	.	.	19 43
Water rates per meter	.	.	.	.	20,147 25
Water construction	.	.	.	.	911 70
					<hr/>
					\$1,088,682 02
					<hr/>

JOHN A. KENRICK,
Treasurer and Collector, City of Newton.

CITY OF NEWTON, Dec. 31, 1886.

The Joint Committee on Finance beg leave to report, that, in pursuance of Section 13, Ordinance 4, they have examined the books and accounts of the Treasurer and Collector for the financial year ending December 31, 1886, and find them correct in all respects, and all payments properly vouched.

Cash on hand Dec. 31, 1885	.	.	.	.	\$55,218 93
<i>Amount carried forward,</i>	.	.	.	.	<hr/>\$55,218 93

<i>Amount brought forward,</i>	\$55,218 93
Total cash receipts for the year ending Dec. 31, 1886	1,033,463 09
	<hr/>
	1,088,682 02
Payments for the year	1,044,043 80
	<hr/>
Cash on hand at close of business Dec. 31, 1886	\$44,638 22

This balance has been verified by examination of the bank balances to the credit of the city, and cash and cash items in the office.

They further report that there remains due and uncollected the following taxes and assessments:—

Taxes of 1883 and previous years	\$2,104 89
Taxes of 1884	1,663 46
Taxes of 1885	2,311 44
Taxes of 1886	77,855 28
	<hr/>
	\$83,935 07
Sidewalks and Curbing Assessments	166 28
Betterments on Drains, Wards 1 and 2, estimated	700 00
Betterments on Farlow Park	1,354 05
	<hr/>
Total	\$86,155 40

Respectfully submitted.

B. S. GRANT, SAM'L L. POWERS, JAMES W. FRENCH, F. JOHNSON.	} <i>Committee on Finance.</i>
---	--

**LIABILITIES OF THE CITY OF NEWTON TO DEC. 31, 1886
INCLUSIVE.**

Water loan, 6 per cent	\$600,000 00
	<hr/>
<i>Amount carried forward,</i>	\$600,000 00

<i>Amount brought forward,</i>	\$600,000 00	
Accrued interest on same	18,000 00	
Water loan, 5 per cent	250,000 00	
Accrued interest on same	6,250 00	
Water loan, 4 per cent	181,000 00	
Accrued interest on same	1,810 00	
	<hr/>	\$1,057,060 00
Town notes, 6 1-2 per cent	\$46,000 00	
Accrued interest on same	581 59	
	<hr/>	46,581 59
Town notes, 6 per cent	\$147,000 00	
Accrued interest on same	2,187 62	
	<hr/>	149,187 62
Municipal bonds, 5 per cent	\$34,000 00	
Accrued interest on same	850 00	
	<hr/>	34,850 00
Public park bonds, 4 per cent	\$25,000 00	
Accrued interest on same	250 00	
	<hr/>	25,250 00
School house notes, 4 per cent	\$41,200 00	
Accrued interest on same	714 13	
	<hr/>	41,914 13
Newton school bonds, 4 per cent	\$44,000 00	
Accrued interest on same	440 00	
	<hr/>	44,440 00
Temporary loan	\$69,700 00	
Accrued interest on same	152 33	
	<hr/>	69,852 33
Uninvested portion of principal of Kenrick Fund		2,740 00
Suspense account, amount in treasury subject to call by sundry parties		778 05
High school loan 3 1-2 per cent	\$45,000 00	
Accrued interest on same	367 50	
	<hr/>	45,367 50
<i>Amount carried forward,</i>		<hr/> \$1,518,021 22

<i>Amount brought forward,</i> . . .	\$1,518,021 22	
Newton Free Library loan 3 1-2 per cent . . .	\$23,000 00	
Accrued interest on same . . .	194 54	
	<hr/>	23,194 54
High School land loan 3 1-2 per cent	\$10,000 00	
Accrued interest on same . . .	91 39	
	<hr/>	10,091 39
Mayor's warrants unpaid, appropriations, etc. . . .	\$22,293 12	
Mayor's warrants unpaid, water construction . . .	2,879 91	
Mayor's warrants unpaid on account of enlargement of High school building . . .	3,500 00	
Mayor's warrants unpaid on account of addition to public library building . . .	1,500 00	
Mayor's warrants unpaid on account of income of the Read Fund	1,090 56	
Premium on tax sale	12 00	
	<hr/>	31,275 59
		<hr/>
		\$1,582,582 74

DETAILED STATEMENT OF ASSETS.

Balance of taxes, 1879 to 1883 inclusive . . .	\$2,104 89
Balance of taxes, 1884, . . .	1,663 46
Balance of taxes, 1885, . . .	2,311 44
Balance of taxes, 1886, . . .	77,855 28
	<hr/>
	\$83,935 07
Due from Commonwealth of Massachusetts as follows:—	

<i>Amount carried forward,</i> . . .	<hr/>	\$83,935 07
--------------------------------------	-------	-------------

<i>Amount brought forward, .</i>	\$83,935 07
On account of aid to soldiers and sailors under chapters 301 and 252, Acts of 1879 .	1,500 00
Balance of corporation tax .	6,573 08
Armory rent for 1886 . .	400 00
Due from county treasurer:—	
Dog tax for 1886 . . .	2,337 66
Due from miscellaneous sources; viz.,—	
From sundry persons for bet- terments on drains in Wards 1 and 2 estimated . .	700 00
From sundry persons for bet- terments on Farlow park .	1,354 05
From sundry persons for side- walks and curbing assess- ments	166 28
Cash on hand	44,638 22

Sinking Funds.

Water debt sinking fund:—

City of Newton water bonds,
5 per cent. . \$62,000 00City of Newton wa-
ter bonds, 4 per
per cent. . . 125,000 00City of Newton
schoolhouse note,
4 per cent. . . 5,150 00Cash on deposit on
interest . . 2,127 37

\$194,277 37

Amounts carried forward, . \$335,881 73 \$1,582,582 74

Amounts brought forward, . \$335,881 73 \$1,582,582 74

City debt sinking fund:—

City of Newton water bonds,
5 per cent. . \$11,000 00

City of Newton wa-
ter bonds, 4 per
cent. . . 15,000 00

Cash on deposit on
interest . . 1,096 09
————— \$27,096 09

Public Park Sinking Fund.

City of Newton water bonds, 4
per cent. . . \$12,000 00

Cash on deposit on
interest . . 131 47
————— \$12,131 47

School Loan Sinking Fund.

City of Newton water
bonds, 4 per cent. \$4,000 00

Cash on deposit on
interest . . 473 33
————— \$4,473 33
————— \$379,582 62
—————
\$1,203 000 12

RECAPITULATION.

Water Debt.

Water loan \$1,031,000 00
Accrued interest on same . 26,060 00
Mayor's warrants unpaid for
construction . . . 2,879 91
—————
Amount carried forward, . \$1,059,939 91

<i>Amount brought forward,</i>	\$1,059,939 91	
Sinking fund	194,277 37	
	<hr/>	
Net water liability		\$865,662 54

City Debt, Exclusive of Water Debt.

Town notes	\$193,0000 0	
Accrued interest on same	2,769 21	
	<hr/>	\$195,769 21
Municipal bonds	34,000 00	
Accrued interest on same	850 00	
	<hr/>	\$34,850 00
Public park bonds	25,000 00	
Accrued interest on same	250 00	
	<hr/>	\$25,250 00
Schoolhouse notes	41,200 00	
Accrued interest on same	714 13	
	<hr/>	\$41,914 13
Newton school bonds	44,000 00	
Accrued interest on same	440 00	
	<hr/>	\$44,440 00
Temporary loan	69,700 00	
Accrued interest on same	152 33	
	<hr/>	\$69,852 33
Uninvested portion of principal of Kenrick Fund		\$2,740 00
Suspense account, amount in treasury subject to call by sundry parties		\$778 05
High school loan	45,000 00	
Accrued interest on same	367 50	
	<hr/>	\$45,367 50
Newton Free Library loan	23,000 00	
Accrued interest on same	194 54	
	<hr/>	\$23,194 54
High school land loan, 3 1-2 per cent	10,000 00	
	<hr/>	
<i>Amount carried forward,</i>	\$10,000 00	\$484,155 76

<i>Amount brought forward,</i>	\$10,000 00	
Accrued interest on same	91 39	
	<hr/>	\$10,091 39
Mayor's warrants unpaid, appro- priations, etc.	22,293 12	
Mayor's warrants unpaid on account of enlargement of High school building	3,500 00	
Mayor's warrants unpaid on account of addition to public library building	1,500 00	
Mayor's warrants unpaid on account of income of the Read Fund	1,090 56	
Premium on tax sale	12 00	
	<hr/>	\$28,395 68
		<hr/>
		\$522,642 83
Cash on hand	\$44,638 22	
Sinking fund	27,096 09	
Public park sinking fund	12,131 47	
School loan sinking fund	4,473 33	
Balance taxes uncollected	83,935 07	
Other assets uncollected	13,031 07	
	<hr/>	\$185,305 25
		<hr/>
Net city liability		\$337,337 58

RECEIPTS.

The receipts for the year ending Dec. 31, 1886, are shown in the aggregates, as credited in the following accounts:—

Number of account.		
1. Almshouse		\$2,222 20
		<hr/>
<i>Amount carried forward,</i>		\$2,222 20

<i>Amount brought forward,</i>	.	.	.	.	\$2,222 20
2. Armory	.	.	.	.	749 27
3. Betterments	.	.	.	.	1,729 57
4. City Hall	.	.	.	.	875 00
5. Collectors fees	.	.	.	.	250 97
6. Corporation tax	.	.	.	.	40,853 30
7. Dog tax	.	.	.	.	2,081 23
8. Drains and culverts	.	.	.	.	403 75
9. Druggists' license-fees	.	.	.	.	17 00
10. Funded debt, water bonds	.	.	.	.	34,000 00
11. Funded debt, public library loan	.	.	.	.	23,000 00
12. Funded debt, high school loan	.	.	.	.	55,000 00
13. Gravel land	.	.	.	.	805 80
14. Highway department	.	.	.	.	6,717 69
15. Interest on Farlow Park betterments	.	.	.	.	130 38
16. Interest on deposits	.	.	.	.	503 76
17. Interest on taxes	.	.	.	.	1,895 43
18. Interest on city loans	.	.	.	.	5 00
19. Interest on water bonds	.	.	.	.	226 66
20. Interest on real estate tax title	.	.	.	.	121 81
21. Indigent soldiers and sailors	.	.	.	.	476 50
22. Kenrick fund income	.	.	.	.	108 67
23. Miscellaneous	.	.	.	.	42 31
24. National bank tax	.	.	.	.	11,045 23
25. Newton free library, catalogue account	.	.	.	.	13 00
26. Police department	.	.	.	.	768 16
27. Poor out of almshouse	.	.	.	.	1,530 87
28. Pedlers' license	.	.	.	.	22 00
29. Parks and squares	.	.	.	.	61 50
30. Public property	.	.	.	.	355 00
31. Record and other fees	.	.	.	.	280 20
32. Real estate tax title	.	.	.	.	622 06
33. Read fund income	.	.	.	.	2,419 25
<i>Amount carried forward,</i>	.	.	.	.	<hr/>\$189,333 57

<i>Amount brought forward,</i>	.	.	.	.	\$189,333 57
34. School incidentals	.	.	.	.	33 64
35. Ships engaged in foreign trade	.	.	.	.	2,471 02
36. Sinking fund commissioners	.	.	.	.	20,000 00
37. Sidewalks and curbing	.	.	.	.	683,55
38. State aid	.	.	.	.	915 00
39. Suspense account	.	.	.	.	118 12
40. Taxes 1883 and previous years	.	.	.	.	22 69
41. Taxes 1884	.	.	.	.	919 54
42. Taxes 1885	.	.	.	.	62,054 94
43. Taxes 1886	.	.	.	.	380,095 01
44. Tuition for non-resident pupils	.	.	.	.	806 50
45. Temporary loans	.	.	.	.	314,400 00
46. Water maintenance	.	.	.	.	6 00
47. Water meters and service pipe	.	.	.	.	6,311 50
48. Water rates	.	.	.	.	34,213 63
49. Water rates by meters	.	.	.	.	20,147 25
50. Water department	.	.	.	.	19 43
51. Water construction	.	.	.	.	911 70
					<hr/>
Total receipts	.	.	.	.	\$1,033,463 09

EXPENSES.

The claims for the year ending Dec. 31, 1886, as approved and drawn for in the auditor's office, are shown in the aggregates as charged to the following accounts: —

Number of account.				
1. Almshouse, expenses and repairs	.	.	.	\$3,376 62
<i>Amount carried forward,</i>	.	.	.	\$3,376 62

<i>Amount brought forward,</i>	.	.	.	.	\$3,376 62
2. Armory expenses	.	.	.	.	978 88
3. Auburndale (Williams) school house	.	.	.	.	779 67
4. Auburndale sub-way	.	.	.	.	6,573 23
5. Books, stationery and printing	.	.	.	.	2,330 61
6. Board of health	.	.	.	.	2,185 80
7. Burial grounds	.	.	.	.	393 75
8. Conveyance of pupils	.	.	.	.	785 00
9. Curbing	.	.	.	.	1,500 00
10. City hall expenses	.	.	.	.	1,825 00
11. City engineer's department	.	.	.	.	7,283 79
12. Drains and culverts	.	.	.	.	14,779 63
13. Evening schools	.	.	.	.	532 98
14. Fire department	.	.	.	.	26,759 42
15. Funded debt	.	.	.	.	20,000 00
16. Funded debt, school house note	.	.	.	.	5,150 00
17. Gravel land	.	.	.	.	1,259 57
18. Highway, general repairs	.	.	.	.	69,893 35
19. Highways, widening, reconstruction, and im- provement	.	.	.	.	21,220 92
20. Interest on city loans, permanent	.	.	.	.	19,221 00
21. Interest on city loans, temporary	.	.	.	.	5,175 97
22. Interest on water bonds	.	.	.	.	54,380 00
23. Indigent soldiers and sailors	.	.	.	.	897 00
24. Kenrick fund income	.	.	.	.	136 70
25. Land damages	.	.	.	.	1,525 00
26. Memorial day	.	.	.	.	400 00
27. Miscellaneous expenses	.	.	.	.	18,103 92
28. Newton free library	.	.	.	.	8,499 97
29. Newton free library (addition)	.	.	.	.	13,900 00
30. Parks and squares	.	.	.	.	2,406 64
31. Police department	.	.	.	.	21,591 46
32. Poor out of almshouse	.	.	.	.	7,661 96
<i>Amount carried forward,</i>	.	.	.	.	<hr/>\$341,507 84

<i>Amount brought forward,</i>		\$341,507 84
33. Poor out of almshouse, Commonwealth of Massachusetts		5 72
34. Public property		14,097 31
35. Removal of ashes		3,211 83
36. Read fund income		1,452 74
37. Salaries		14,693 00
38. Schools, general appropriations for		96,517 43
39. Schools, enlargement of high school building		32,900 00
40. School incidentals		15,452 89
41. Sidewalks and street crossings		10,000 00
42. Sinking fund, city debt		21,500 00
43. Sinking fund, school loan		4,500 00
44. Sinking fund, water bonds		18,000 00
45. Sinking fund, public park loan		852 90
46. State aid		1,034 95
47. Street light department		21,113 97
48. Suspense account.		1 75
49. Taxes 1886, county		14,934 33
50. Taxes 1886, corporation		26 15
51. Taxes 1886, national bank		922 51
52. Taxes 1886, state		24,840 00
53. Temporary loans		319,700 00
54. Use of hydrants		8,940 00
55. Underwood school house (improvements of)		4,100 00
56. Water maintenance		12,952 51
57. Water meters and service pipe		5,998 86
58. Water rebate		351 07
59. Water construction		45,105 04
Total expenses		<hr/> \$1,034,712 80

TABLE SHOWING APPROPRIATIONS, TRANSFERS, MAYOR'S WARRANTS, TREASURER'S PAYMENTS, DIFFERENCES, EXCESS, AND DEFICIENCY ACCOUNTS.

OBJECT OF APPROPRIATION.	APPROPRIATIONS FOR 1886.	TRANSFERS.	TOTAL APPROPRIATIONS.	MAYOR'S WARRANTS.	TREASURER'S PAYMENTS.	DIFFERENCES.	EXCESS AND DEFICIENCY ACCOUNT.	
							Overdrawn.	Unexpended.
Almshouse expenses and repairs \$4,000.00 } Transferred from treasury amount received from B. & A. Railroad .300.00 }	\$4,300 00	—	\$4,300 00	\$3,376 62	\$3,626 58	\$249 96	—	\$923 38
Armory expenses \$700.00 } Additional, by order of the City Council 400.00 }	1,100 00	—	1,100 00	978 88	947 26	— 31 62	—	121 12
Books, Stationery and Printing	2,150 00	—	2,150 00	2,330 61	2,652 37	321 76	\$180 61	—
Board of Health	4,000 00	\$534 64	3,465 36	2,185 80	2,872 06	686 26	—	1,279 56
Burial Grounds	400 00	—	400 00	393 75	393 75	—	—	6 25
City Engineer's Department	6,750 00	534 64	7,284 64	7,283 79	7,223 70	— 60 09	—	85
City Hall expenses	1,600 00	—	1,600 00	1,825 00	2,187 23	362 23	225 00	—
Fire Department	26,000 00	125 00	26,125 00	26,759 42	26,823 98	64 56	634 42	—
Highways, Curbing	1,500 00	—	1,500 00	1,500 00	1,500 00	—	—	—
Highways, Drains and Culverts, \$12,000.00 } Additional, by order of City Council 2,803.75 }	14,803 75	—	14,803 75	14,779 63	13,937 35	— 842 28	—	24 12
Highways, General Repairs . . \$55,000.00 } Additional, by order of City Council 14,081.32 }	69,081 32	—	69,081 32	69,893 35	72,209 49	2,316 14	812 03	—
Highways, Gravel Land \$2,000.00 } Additional, by order of City Council 567.00 }	2,567 00	—	2,567 00	1,259 57	1,257 32	— 2 25	—	1,307 43
Highways, Land Damages	2,000 00	—	2,000 00	1,525 00	2,467 50	942 50	—	475 00
Highways, Removal of Ashes	3,500 00	—	3,500 00	3,211 83	3,302 63	90 80	—	288 17
Highways, Sidewalks and Street Crossings	10,000 00	—	10,000 00	10,000 00	10,662 60	662 60	—	—
Highways, Widening, Reconstruction and Improvements	22,000 00	—	22,000 00	21,250 92	21,013 36	— 207 56	—	779 08

TABLE SHOWING APPROPRIATIONS, ETC., Concluded.

OBJECT OF APPROPRIATION.	APPROPRIATIONS FOR 1886.	TRANSFERS.	TOTAL APPROPRIATIONS.	MAYOR'S WARRANTS.	TREASURER'S PAYMENTS.	DIFFERENCES.	EXCESS AND DEFICIENCY ACCOUNT.	
							Overdrawn.	Unexpended.
Indigent Soldiers and Sailors	\$1,000 00	—	\$1,000 00	\$897 00	\$921 00	\$24 00	—	\$103 00
Interest on City Loans, permanent	19,241 00	—	19,241 00	19,221 00	19,270 17	49 17	—	20 00
Interest on City Loans, temporary	8,259 00	—	8,259 00	5,175 97	5,066 35	— 109 62	—	3,083 03
Interest on Water Bonds	54,380 00	—	54,380 00	54,380 00	54,380 00	—	—	—
Memorial Day	400 00	—	400 00	400 00	400 00	—	—	—
Miscellaneous Expenses	\$10,000.00	—	—	—	—	—	—	—
Additional, by order of City Council	6,300 00	\$390 00	15,940 00	18,103 92	17,986 86	— 117 06	\$2,193 92	—
Newton Free Library	8,500 00	—	8,500 00	8,499 97	8,840 51	340 54	—	03
Parks and Squares	\$2,000.00	—	—	—	—	—	—	—
Additional, by order of City Council	500 00	—	2,500 00	2,406 64	2,592 50	185 86	—	93 36
Police Department	\$21,500.00	—	—	—	—	—	—	—
Additional, by order of City Council	94 00	—	21,594 00	21,591 46	22,321 50	730 04	—	2 54
Poor out of Almshouse	8,000 00	—	8,000 00	7,661 96	7,893 10	231 14	—	338 04
Public Property	\$11,000.00	—	—	—	—	—	—	—
Additional, by order of City Council	3,000 00	—	14,000 00	14,007 31	13,319 90	— 777 41	97 31	—
Salaries	14,400 00	—	14,400 00	14,693 00	15,597 04	904 04	293 00	—
Schools, Conveyance of Pupils	450 00	355 00	805 00	785 00	805 00	20 00	—	20 00
Schools, Evening	550 00	—	550 00	532 98	527 83	— 5 15	—	17 02
Schools, General Appropriation	\$101,300.00	—	—	—	—	—	—	—
Schools, Dog Tax, 1885, by order of City Council	2,081.23	6,090 00	97,291 23	96,517 43	96,937 43	420 00	—	773 80
Schools, Incidentals	9,500 00	6,000 00	15,500 00	15,452 89	15,597 76	144 87	—	47 11
School House Note	5,150 00	—	5,150 00	5,150 00	5,150 00	—	—	—

Sinking Fund on City Debt.	21,500 00	—	21,500 00	21,500 00	—	7 00	34 95	636 03
Sinking Fund on School Loan.	4,500 00	—	4,500 00	4,500 00	—	—	—	—
Sinking Fund on Water Bonds.	18,000 00	—	18,000 00	18,000 00	—	—	—	—
State Aid.	1,000 00	—	1,000 00	1,034 95	—	—	—	—
Street Light Department.	21,750 00	—	21,750 00	21,113 97	—	3,952 69	—	636 03
Use of Hydrants.	8,940 00	—	8,940 00	8,940 00	—	—	—	—
Water Maintenance.	13,000 00	—	13,000 00	12,952 51	—	996 99	—	47 49
Water Meters and Service Pipe.	6,000 00	—	6,000 00	5,998 86	—	612 80	—	1 14
Water, Rebate on Bills.	500 00	—	500 00	351 07	—	—	—	148 93
Less Mayor's Warrants of 1885, paid by Treasurer in 1886.	—	—	—	—	—	\$14,315 95	\$4,471 24	\$10,536 48
Less Mayor's Warrants of 1886, paid by treasurer in 1887, on account of Amburdaie Sub-way (special) \$12.31, and State Aid, \$4.00.	—	—	—	—	—	— 2,153 04	—	4,471 24
Amount of Mayor's Warrants for 1886, paid by Treasurer in 1887. Appropriations	—	—	—	—	—	—	—	—
Transferred into Treasury.	\$554,547 30	—	\$554,547 30	\$548,482 06	—	\$12,162 91	—	\$6,065 24

PERMANENT DEBT—DESCRIPTIVE LIST.

	RATE.	DATE OF LOAN, ETC.	PAYABLE.	AMOUNT.	INTEREST, WHEN PAYABLE.
City Institution for Savings, Lowell	6 per cent	Oct. 3, 1867	Oct. 3, 1887	\$20,000 00	April and October
Commonwealth of Massachusetts	6 per cent	April 1, 1868	April 1, 1888	30,000 00	April and October
“ “ “ “	6½ per cent	April 21, 1871	April 21, 1888	46,000 00	April and October
“ “ “ “	6 per cent	April 22, 1870	April 22, 1890	20,000 00	April and October
“ “ “ “	6 per cent	April 22, 1870	April 22, 1892	30,000 00	April and October
“ “ “ “	6 per cent	March 10, 1875	March 10, 1894	47,000 00	March and September
Municipal Bonds, \$1,000 each	5 per cent	July 1, 1875	July 1, 1895	34,000 00	January and July
Water Bonds, \$1,000 each	6 per cent	July 1, 1875	July 1, 1905	600,000 00	January and July
“ “ \$1,000 each	5 per cent	July 1, 1875	July 1, 1906	250,000 00	January and July
“ “ \$1,000 each	4 per cent	Oct. 1, 1880	Oct. 1, 1910	181,000 00	April and October
Public Park Bonds, \$1,000 each	4 per cent	June 1, 1883	April 1, 1908	25,000 00	April and October
Schoolhouse Notes, \$5,150 each	4 per cent	Jan. 25, 1884	One each year	41,200 00	January and July
School Loan Bonds, \$1,000 each	4 per cent	April 1, 1885	April 1, 1895	44,000 00	April and October
School Notes \$4,500 each	3½ per cent	Oct. 6, 1886	One each year	45,000 00	April and October
School Notes for Land \$5,000 each	3½ per cent	Sept. 27, 1886	One each year	10,000 00	April and October
Newton Free Library Loan \$4,600 each	3½ per cent	Oct. 4, 1887	One each year	23,000 00	March and September
				\$1,446,200 00	

STATEMENT OF THE KENRICK FUND.

The following is a statement of this fund and its income,

Jan. 1, 1887 :—

Amount invested	\$1,260 00
Cash uninvested	2,740 00

Total fund	<u>\$4,000 00</u>
----------------------	-------------------

Balance income on hand Jan. 1, 1886	\$49 53
Income received in 1886 . . .	108 67

\$158 20

Amount distributed	136 70
------------------------------	--------

Balance	<u>\$21 50</u>
-------------------	----------------

The distribution of the income of this fund has been made in accordance with the terms of the donor, to persons entitled to its benefits.

TAXES AND TAXABLE VALUATION.

The following will show the valuation of the property of the city on which taxes were assessed for the year 1886, with the amount of taxes and rate of taxation :—

Value of real estate	\$21,977,061 00
Value of personal estate	9,039,869 00

\$31,016,930 00

Tax received for corporation stocks . . .	40,853 30
---	-----------

Tax received for bank stocks . . .	11,045 23
------------------------------------	-----------

\$51,898 53

City appropriations for current expenses	524,420 00
--	------------

Deduct estimated receipts for 1886 . . .	118,550 00
--	------------

\$405,870 00

State tax	24,840 00
County tax	14,934 33
Overlay	7,941 46

Total assessments	\$453,585 79
-----------------------------	--------------

Rate of taxation \$14.40 on \$1000.

LEDGER BALANCES.

DR.

Betterments Farlow Park	\$1,354 05
Betterments, Newtonville drain	1,883 70
Bills receivable	250 00
Bills receivable, Kenrick fund	1,260 00
Cash	44,638 22
Public property owned by the city	951,762 60
Taxes 1883 and previous years	2,104 89
Taxes 1884	1,663 46
Taxes 1885	2,311 44
Taxes 1886	77,855 28
Water construction	1,040,629 15
	<hr/>
	\$2,125,712 79

CR.

City of Newton	\$536,780 84
Funded debt 5 per cent bonds	34,000 00
Funded debt 6 1-2 per cent. city notes	46,000 00
Funded debt 6 per cent. city notes	147,000 00
Funded debt 3 1-2 per cent. school notes	10,000 00

Amount carried forward, \$773,780 84

<i>Amount brought forward.</i>	\$773,780 84
Funded debt 3 1-2 per cent. school notes	45,000 00
Funded debt 3 1-2 per cent. Newton free library notes	23,000 00
Funded debt 4 per cent public park bonds	25,000 00
Funded debt 4 per cent school notes	41,200 00
Funded debt 4 per cent school bonds	44,000 00
Funded debt 6 per cent water scrip	600,000 00
Funded debt 5 per cent water scrip	250,000 00
Funded debt 4 per cent water scrip	181,000 00
High school extension appropriation	25,600 00
Interest on Farlow Park betterments	159 81
Kenrick fund	4,021 50
Mayor's warrants, unpaid bills	22,293 12
Newton free library extension appropriation	10,600 00
Overlay 1884	432 66
Overlay 1885	3,336 44
Overlay 1886	4,707 81
Premium on tax sale	12 00
Read fund income	1,090 56
Suspense account	778 05
Temporary loans	69,700 00
	<hr/>
	\$2,125,712 79
	<hr/>

**REPORT OF THE SINKING FUND COMMISSIONERS
OF THE CITY OF NEWTON.**

NEWTON, Jan. 1, 1887.

In accordance with the requirements of the City Charter and Ordinances, the Sinking Fund Commissioners herewith report the condition of the funds and securities in their charge on the 31st day of December 1886.

WATER DEBT SINKING FUND.

On hand in cash and securities at par Jan. 1,	
1886	\$169,072 30
Received interest on securities and bank de-	
posits	7,378 40
Received appropriation by the city for 1886	18,000 00
	<hr/>
	\$194,450 70

LESS.

Accrued interest on \$26,000 4 per cent water	
bonds bought of the city	173 33
	<hr/>
	\$194,277 37

Invested as follows : —

City of Newton 5 per cent water bonds due	
July 1, 1906	62,000 00
City of Newton 4 per cent water bonds due	
Oct. 1, 1910	62,000 00
City of Newton 4 per cent water bonds due	
April 1, 1914	63,000 00
City of Newton 4 per cent school note due	
Jan. 25, 1894	5,150 00
Cash on deposit in bank	2,127 37
	<hr/>
	\$194,277 37

CITY DEBT SINKING FUND.

On hand in cash and securities at par, Jan. 1,	
1886	\$24,516 20
Received interest on bonds and deposits .	1,093 22
Received appropriation by the city for 1886	21,500 00
	<hr/>
<i>Amount carried forward</i>	\$47,109 42

Amount brought forward . . . \$47,109 42

LESS.

Accrued interest on \$2,000 4 per cent.

water bonds bought of the city \$13 33

Paid city treasurer to pay note due

Oct. 3, 1886 . . . 20,000 00 20,013 33

27,096 09

Invested as follows:—

City of Newton 5 per cent water bonds at
par due July 1, 1906 . . .

\$11,000 00

City of Newton 4 per cent water bonds at
par due Oct. 1, 1910 . . .

13,000 00

City of Newton 4 per cent water bonds at
par due Apr. 1, 1914 . . .

2,000 00

Cash on deposit in bank . . .

1,096 09

\$27,096 09

Public Park Sinking Fund.

On hand in cash and securities at par, Jan. 1,
1886 . . .

\$10,862 55

Received balance of interest on securities and
bank deposits . . .

416 02

Received on account of betterments collected
by the City . . .

852 90

\$12,131 47

Invested as follows:—

City of Newton 4 per cent water bonds, due
Apr. 1, 1914 . . .

12,000 00

Cash on deposit in bank . . .

131 47

\$12,131 47

School Loan Sinking Fund.

Received appropriation by the City for 1886	\$4,500 00
---	------------

Less

Accrued interest on \$4000 4 per cent water bonds bought of the City	26 67
---	-------

\$4,473 33

Invested as follows:—

City of Newton 4 per cent water bonds, due Apr. 1, 1914	4,000 00
Cash on deposit in bank	473 33
	<hr/>
	\$4,473 33

During the year your commissioners have bought of the city \$26,000 4 per cent water bonds for the water debt sinking fund, \$2,000 4 per cent water bonds for the city debt sinking fund, \$2,000 4 per cent water bonds for the public park sinking fund, and \$4,000 4 per cent water bonds for the school loan sinking fund, making \$34,000, all of which are due Apr. 1, 1914; and have paid to the city treasurer \$20,000 from the city debt sinking fund to enable him to pay a note of same amount which fell due Oct. 3, 1886.

We also reported in September last, that there should be appropriated for the year 1887, as follows:—

For the city debt sinking fund	\$21,500 00
For the water debt sinking fund	20,000 00
For the school loan sinking fund	4,500 00

Respectfully submitted.

GEO. S. BULLENS,)	<i>Commissioners of the Sinking Fund.</i>
ALDEN SPEARE,)	
GEORGE C. LORD,)	

REPORT OF THE TRUSTEES OF THE READ FUND.

NEWTON, Jan. 1, 1887.

In accordance with Ordinance XXVIII, Section 3, we beg leave to report to the City Council as follows:—

Amount of interest collected for 1886 . . .	\$1,615 75
Less	
Paid to the treasurer of the City of Newton . . .	1,615 75

Principal invested as follows:—

Note of the City of Newton dated Dec. 1, 1886	
on 12 months with interest semi-annually	
4 per cent per annum	\$39,700 00

GEO S. BULLENS,	} Trustees of the Read Fund.
ALDEN SPEARE,	
GEORGE C. LORD,	

STATEMENT IN DETAIL OF RECEIPTS.

Almshouse.

Received from N. D. Moody, warden, for sale of hay, straw, produce, wood, etc.	\$1,726 85
Received for support of Chas. Sawyer and wife	95 15
Received for support of Mrs. Thomas	40 00
Received from Fire Department for telegraph poles	27 50
Received from B. & A. Railroad for railroad ties	23 70
Received from Crocker & Eldredge,	
Amount carried forward,	\$1,913 20

<i>Amount brought forward, .</i>	\$1,913 20	
refund of bill	9 00	
Received from Boston & Albany Railroad corporation for build- ing bridge over tracks of Cir- cuit Railroad	300 00	
	<hr/>	
Total, as per item No. 1 of receipts .		\$2,222 20

Armory.

Received from Commonwealth of Massa- chusetts, for rent of armory	\$400 00	
Received from Capt. Isaac H. Houghton 2-3 of amount received for rent of armory	349 27	
	<hr/>	
Total, as per item No. 2 of receipts .		\$749 27

Betterments.

Received from sundry persons on acct. of Farlow Park	\$1,381 77	
Received from sundry persons on acct. of Murray street	275 00	
Received from sundry persons on acct. of Newtonville drain	72 80	
	<hr/>	
Total, as per item No. 3 of receipts .		\$1,729 57

City Hall.

Received for use of hall, etc. .	\$375 00	
Received from treasurer of County of Middlesex,		
<i>Amount carried forward, .</i>		\$375 00

Amount brought forward, . \$375 00

for rent of police court

room 500 00

Total, as per item

No. 4 of receipts \$875 00

Collector's Fees.

Received from John A. Ken-

rick, treasurer and col-

lector of taxes, for sum-

monses, advertising tax

sales, etc., as per item

No. 5 of receipts \$250 97

Corporation Tax.

Received from Common-

wealth of Massachusetts,

as per item No. 6 of

receipts \$40,853 30

Dog Tax.

Received from Treasurer of

County of Middlesex,

for dog tax, as per item

No. 7 of receipts \$2,081 23

Drains and Culverts.

Received from sundry per-

sons on account of

Eldredge street drain . . . \$325 00

Received from E. W. Gay on

account of drain in

Tremont street . . . 78 75

Total as per item No.

8 of receipts \$403 75

Druggists' License Fees.

Received from sundry persons for liquor licenses of the sixth class, as per item No. 9 of receipts	\$17 00
--	---------

Funded Debt--Water Bonds.

Received from commissioners of the Sinking Funds of city of Newton for twenty-six water bonds, 4 per cent., \$1,000 each, on account of water construction . . .	\$26,000 00
--	-------------

Received from commissioners of the Sinking Funds of City of Newton for four water bonds, 4 per cent., \$1,000 each, on account of school loan . . .	4,000 00
---	----------

Received from commissioners of the Sinking Funds of City of Newton for two water bonds, 4 per cent., \$1,000 each, on account of city debt . . .	2,000 00
--	----------

<i>Amount carried forward,</i> . . .	<u>\$32,000 00</u>
--------------------------------------	--------------------

<i>Amount brought forward,</i> .	\$32,000 00
Received from commissioners of the Sinking Funds of city of Newton for two water bonds, 4 per cent., \$1,000 each, on account of Public Park Loan	2,000 00
Total as per item No. 10 of receipts	\$34,000 00

Funded Debt—Public Library Loan.

Received from F. S. Moseley for five City of Newton notes, 3 1-2 per cent., \$4,600 each, for an addition to the Newton Free Library, as per item No. 11 of receipts	\$23,000 00
--	-------------

Funded Debt—High School Loan.

Received from Institution for savings, Newburyport, for two City of Newton notes, 3 1-2 per cent., \$5,000 each, for land for the enlargement of the High school building .	\$10,000 00
<i>Amount carried forward,</i> .	\$10,000 00

<i>Amount brought forward,</i> .	\$10,000 00
Received from Brewster, Cobb & Estabrook for ten City of Newton notes, 3 1-2 per cent., \$4,500 each, for the enlargement of the High school building .	45,000 00
Total as per item No. 12 of receipts	\$55,000 00

Gravel Land.

Received from Andrew Broderick for land on Dalby and Faxon streets from which the gravel had been re- moved	\$567 00
Received from Roger Sullivan for land on Cook street from which the gravel had been removed	238 80
Total as per item No. 13 of receipts	\$805 80

Highway—General Repairs.

Received from Almshouse Department for ma- nure from city stables . .	\$276 00
<i>Amount carried forward,</i>	\$276 00

<i>Amount brought forward,</i>	.	.	\$276 00
Received from sundry persons amount paid for labor entered upon pay-rolls, and also by discharge tickets	.	.	85 62
Received from sundry persons on account of extension of Bellevue street	.	.	75 00
Received from S. P. Whitman for laying pipe under sidewalk in Centre street	.	.	3 30
Received from Charles Jordan for piece of fence	.	.	10 00
Received from Edward Cummings for cement	.	.	6 25
Received from citizens of Auburndale on account of sub-way under tracks of Boston and Albany Railroad	.	.	2,000 00
Received from Town of Brookline for use of steam road roller	.	.	60 00
Received from Town of Needham one half expense for construction of bridge over Charles river at Nahanton street	.	.	550 00
<i>Amount carried forward,</i>	.	.	

\$3,066 17

<i>Amount brought forward, .</i>	\$3,066 17
Received from Dr. O. E. Hunt, treasurer of Newtonville Improvement Society for grading, concreting, etc., in Newtonville square	82 52
Received from Town of Quincy for use of steam road roller	450 00
Received from Boston Fire Brick Co., for second hand stone crusher	75 00
Received from Boston and Albany Railroad Corporation on account of drainage connected with the Auburndale sub-way	3,000 00
Received from L. B. Gay on account of drain under drive-way	25 00
Received from J. Connolly for pasturage	19 00
<hr/>	
Total as per item No. 14 of receipts	\$6,717 69
Interest on Farlow Park Betterments.	
Received from sundry persons interest on betterments, as per item No. 15 of receipts	\$130 38

Interest on Deposits.

Received from Newton National Bank, on daily balances, as per item No. 16 of receipts	\$503 76
--	----------

Interest on Taxes.

Received from sundry per- sons, interest on taxes, as per item No. 17 of receipts	\$1,895 43
--	------------

Interest on City Loans.

Received from F. H. Prince & Co., interest on loan as per item No. 18 of receipts	\$5 00
--	--------

Interest on Water Bonds.

Received from commission- ers of the Sinking Funds of the City of Newton, accrued in- terest on \$26,000, 4 per cent. water bonds	173 33
--	--------

Received from commis- sioners of the Sinking Funds of the City of Newton, accrued in- terest on account of City debt loan	13 33
--	-------

<i>Amount carried forward,</i>	<hr/> \$186 66
--	----------------

<i>Amount brought forward,</i>	.	.	\$186	66
Received from commis-				
sioners of the Sinking				
Funds of the City of				
Newton, accrued inter-				
est on account of Pub-				
lic Park loan	.	.	13	33
Received from commis-				
sioners of the Sinking				
Funds of the City of				
Newton, accrued in-				
terest on account of				
Newton school loan			26	67
			<hr/>	
Total as per item No.				
19 of receipts	.	.	.	\$226 66

Interest on Real Estate Tax Title.

Received from Fayette D.				
Shaw on account of				
tax-title on property				
of W. F. Kimball,				
(Shaw Estate) as per				
item No. 20 of receipts	.	.	.	\$121 81

Indigent Soldiers and Sailors.

Received from Common-				
wealth of Massachu-				
setts, on account of				
aid to sundry persons,				
under Chap. 252, Acts				
of 1879, as per item				
No. 21 of receipts	.	.	.	\$476 50

Kenrick Fund Income, Etc.

Balance uninvested Jan. 1, 1886		
in city treasury . . .	\$2,740 00	
Balance of income on hand Jan. 1,		
1886	49 53	
	<hr/>	
		\$2,789 53
Income from investments in 1886		
as per item No. 22 of re-		
ceipts		\$108 67
		<hr/>
		\$2,898 20

Expended.

Distributed per order Board of		
Aldermen, as per item		
No. 24 of expenses . . .	\$136 70	
Balance income on hand . . .	21 50	
	<hr/>	
		158 20
		<hr/>
Balance uninvested Jan. 1, 1887		\$2,740 00

Miscellaneous.

Received amount allowed by court for		
costs where the city was trus-		
teed on account of W. H. Stew-		
art, contractor for the Auburn-		
dale School-house . . .	39 07	
Received from W. H. Stewart amount		
of bill paid to H. H. Hunt . .	3 24	
	<hr/>	
as per item No. 23 of receipts		\$42 31

National Bank Tax.

Received from Commonwealth of		
Massachusetts National Bank Tax,		
as per item No. 24 of receipts		\$11,045 23

Newton Free Library.—Catalogue Account.

Received from H. P. James, Librarian, for sale of catalogues, as per item No. 25 of receipts .	\$13 00
--	---------

Police Department.

Received from Edward W. Cate, Clerk of Police Court, fees, fees for witnesses, fines and costs .	674 16
Received from sundry persons reimbursement on account of expenses incurred in case of Officer Bartlett	94 00
Total as per item No. 26 of receipts . . .	\$768 16

Poor out of Almshouse.

Received from Commonwealth of Massachusetts for partial support, etc., of sundry persons .	264 78
Received for partial support of M. H. Porter	540 08
Received for partial support of J. C. Gipson	191 88
Received for partial support of H. J. Harris	30 33
Received for partial support of Mrs. Hockridge	18 10
Received from party, borrowed .	75
Received from City of Boston for partial support of sundry persons	119 35
<i>Amount carried forward,</i>	\$1,165 27

<i>Amount brought forward, .</i>	\$1,165 27	
Received from City of Waltham for partial support of sundry per- sons	101 80	
Received from City of Gloucester for partial support of sundry per- sons	16 00	
Received from City of Cambridge for partial support of sundry per- sons	11 88	
Received from City of Taunton for partial support of sundry per- sons	10 00	
Received from Town of Blackstone for partial support of sundry persons	72 00	
Received from Town of Plymouth for partial support of sundry per- sons	55 63	
Received from Town of Watertown for partial support of sundry persons	30 00	
Received from Town of Needham for partial support of sundry per- sons	23 63 .	
Received from Town of Amherst for partial support of sundry per- sons	23 38	
Received from Town of Concord for partial support of sundry per- sons	21 28	
Total, as per item No. 27 of receipts .		\$1,530 87

Pedlars' Licenses.

Received from Thomas Barbette, as per item No. 28 of receipts	\$22 00
--	---------

Public Parks and Squares.

Received from T. F. Mague refund of amount paid to him, the same having been approved and paid to Henry Ross, sup't of burial grounds, as per item No. 29 of receipts	\$61 50
--	---------

Public Property.

Received for rent of Prospect School- house Hall	\$169 00
Received for rent of Mason School- house Hall	32 00
Received from Auburndale Village Improvement Society for rent of old Williams School-house	50 00
Received from E. M. Fowle, Treas., for use of Crystal Pond	25 00
Received for rent of house, Auburn- dale avenue	18 00
Received from J. O. Evans sons', re- fund of bill	2 95
Transferred into treasury balance of appropriation made by City Council for land for the en- largement of the High School	58 05

Total, as per item No. 30 of receipts	\$355 00
---	----------

Record and Other Fees.

Received from City Clerk, for recording mortgages, marriage certificates, assignments, etc , as per item No. 31 of receipts . . . \$280 20

Real Estate Tax Title.

Received from Fayette D. Shaw on account of tax title on property of W. F. Kimball, (Shaw estate), as per item No. 32 of receipts \$622 06

Read Fund Income.

Received from the Trustees of the Read Fund, interest on investments \$2,409 75

Received from John Q. Henry, chairman, balance unexpended on account of lectures . . . 9 50

Total, as per item No. 33 of receipts . . . \$2,419 25

School Incidentals.

Received from Thomas Emerson, Sup't, for old material sold . . . \$3 62

Received from sundry parties refund on bills , 30 02

Total, as per item No. 34 of receipts . . . 33 64

Ships Engaged in Foreign Trade.

Received from Commonwealth of Massachusetts, on account of ships engaged in foreign trade, as per item No. 35 of receipts . . . \$2,471 02

Sinking Fund Commissioners.

Received from the commissioners of the sinking funds of the City of Newton, for the payment of a note of the town of Newton, as per item No. 36 of receipts	\$20,000 00
---	-------------

Sidewalks and Curbing.

Received from sundry parties, on ac- count of sidewalks and curb- ing, as per item No. 37 of receipts	683 55
---	--------

State Aid.

Received from Commonwealth of Massachusetts, on account of sundry persons, under chapter 301, Acts of 1879, as per item No. 38 of receipts	\$915 00
--	----------

Suspense Account.

Transferred into city treasury sundry amounts due laborers in 1883 and uncalled for, as per item No. 39 of receipts	\$118 12
--	----------

Taxes of 1883 and Previous Years.

Balance uncollected Dec. 31, 1885	\$6,731 05
Received from sundry persons since Dec. 31, 1885, as per item No. 40 of receipts	\$22 69
Abated by board of assessors under authority of Public Statute Chapter 11, Sec. 77	4,603 47
	<hr/>
	\$4,626 16
Balance uncollected Dec. 31, 1886	\$2,104 89

Taxes 1884.

Balance uncollected Dec. 31, 1885	\$2,583 00	
Received from sundry persons, since Dec. 31, 1885, as per item No. 41 of receipts	919 54	
	<hr/>	
Balance uncollected Dec. 31, 1886		\$1,663 46

Taxes 1885.

Balance uncollected Dec. 31, 1885	\$64,366 38	
Received from sundry persons, since Dec. 31, 1885, as per item No. 42 of receipts	62,054 94	
	<hr/>	
Balance uncollected Dec. 31, 1886		\$2,311 44

Taxes 1886.

Amount assessed for State tax	\$ 24,840 00	
Amount assessed for County tax	14,934 33	
Amount assessed for City tax	409,320 00	
Supplementary assessments	5 50	
Tax on non-resident bank shares	909 00	
Overlay	7,941 46	
	<hr/>	
	\$457,950 29	
Received from sundry persons to Dec. 31, 1886, as per item No. 43 of receipts		\$380,095 01
Balance uncollected Dec. 31, 1886		\$77,855 28

Tuition for Non-Resident Pupils.

Received from sundry non-residents for tuition, as per item No. 44 of receipts		\$806 50
--	--	----------

Temporary Loans.

Borrowed during the year, by authority of the City Council (in anticipation of taxes), for the payment of current expenses:

Jan. 27.	Brewster, Cobb & Estabrook, at 2 7-8 per cent. per annum	\$25,000 00
Mar. 5.	Brewster, Cobb & Estabrook, at 2 7-8 per cent. per annum	25,000 00
May 17.	F. H. Prince & Co., at 2 3-4 per cent. per annum	45,000 00
June 26.	Brewster, Cobb & Estabrook, at 2 3-4 per cent. per annum	35,000 00
July 9.	F. S. Moseley, at 3 1-8 per cent. per annum .	25,000 00
July 24.	F. H. Prince & Co., at 3 per cent. per annum .	10,000 00
July 27.	F. H. Prince & Co., at 3 per cent. per annum .	20,000 00
July 28.	F. H. Prince & Co., at 3 per cent per annum .	20,000 00
Sept. 14.	Trustees of the Read fund, at 4 5-8 per cent. per annum	39,700 00
Dec. 1.	Trustees of the Read fund, at 4 per cent. per annum	39,700 00
Dec 27.	Commonwealth of Massachusetts, at 4 per cent. per annum	30,000 00
Total, as per item No. 45 of receipts		<u>\$314,400 00</u>

Water Maintenance.

Received from water registrar, for	.
sale of old stove, as per item	
No. 46 of receipts	\$6 00

Water Meters and Service Pipe.

Received from sundry persons for	
meters, service pipe, etc., as	
per item No. 47 of receipts	\$6,311 50

Water Rates.

Received from sundry persons for	
use of water in 1886 by	
schedule rates, as per item	
No. 48 of receipts	\$34,213 63

Water Rates by Meters.

Received from sundry persons for	
use of water in 1886, by	
meters, as per item No. 49 of	
receipts	\$20,147 25

Water Department.

Received from sundry persons for	
rent of meters, as per item	
No. 50 of receipts	\$19 43

STATEMENT IN DETAIL OF EXPENSES WITH APPROPRIATIONS, TRANSFERS, AND BALANCES.

Almshouse Expenses and Repairs.

Appropriation	\$4,000 00	
Additional from City Treasury received from Boston and Albany Railroad corporation for construction of bridge over tracks of Circuit Rail- road	300 00	
		<hr/>
		\$4,300 00
N. D. Moody, services as warden	\$600 00	
N. D. Moody, sundry cash pay- ments	208 23	
N. D. Moody, construction of bridge	100 00	
William A. Sherman, services at almshouse	148 80	
Joseph Laird, services at alms- house	18 00	
Mary Laird, services at alms- house	105 60	
Charles Sanborn, services at alms- house	43 20	
Mrs. Charles Sanborn, services at almshouse	36 00	
Nellie McLeod, services at alms- house	36 00	
Margaret M. Wood, services at almshouse	36 00	
		<hr/>
<i>Amount carried forward</i>		\$1,331 83

<i>Amount brought forward</i>		\$1,331 83
Lizzie Sargent, services at alms- house	24 00	
Minnie Hatt, services at alms- house	24 00	
Emma King, services at alms- house	12 00	
Mary A. Winslow, services at almshouse	7 20	
Dr. James Utley, medical attend- ance	66 00	
Dr. F. E. Crockett, medical at- tendance	3 00	
Frank W. Freeman, medicines .	9 11	
E. J. Williams, medicines .	9 72	
George H. Gregg, funeral expen- ses	13 50	
James McGourty, funeral expen- ses	8 00	
C. F. Eddy & Co., for coal .	214 72	
Crocker & Eldredge, groceries .	334 14	
H. A. Sherman, groceries .	141 38	
B. B. Vassall, groceries . . .	10 23	
Hall & Lowe, provisions . . .	185 01	
V. A. Pluta, provisions . . .	58 92	
W. B. Whittier, provisions .	40 08	
W. Henry Brackett, provisions	1 15	
Thomas & Miller, provisions .	4 08	
Frank Linnell, fish and oysters	67 37	
Charles A. Cole, new cart and blacksmithing	180 98	
<i>Amount carried forward,</i>		\$2,746 42

<i>Amount brought forward.</i>		\$2,746 42
T. N. Mullen, blacksmithing	6 38	
G. Fuller & Son, lumber	160 58	
E. Smead & Co., grain	39 14	
W. H. Mague, house offal	33 00	
M. E. Church, rent of pew	30 00	
George H. Ellis, ice	27 05	
David Howland, wood	27 00	
Daniels' Nonantum stables, use of teams	6 00	
J. H. Cushman, material and labor	15 11	
Henry H. Hunt, material and la- bor	11 31	
J. L. Sears, material and labor	7 75	
J. O. Evans' Sons, material and labor	4 45	
Everett E. Moody, supplies	179 35	
O. F. Lucas, supplies	29 55	
Dodge, Haley & Co., supplies	20 31	
Charles H. Stone & Co., supplies	15 70	
Ames Plow Co., supplies	8 00	
B. A. Atkinson & Co., supplies	6 69	
M. Frank Lucas, supplies	2 83	
<hr/>		
Total, as per item No. 1 of ex- penses		3,376 62
<hr/>		
Balance unexpended, transferred into treasury		\$923 38

Armory Expenses.

Appropriation	\$100 00	
Additional appropriation by order of the City Council	400 00	
		<hr/>
		\$1,100 00
Isaac H. Houghton, for amount paid for sundry bills of furniture . .	\$204 37	
B. S. Wetherbee, services as janitor . .	325 00	
Newton & Watertown Gas Light Co., gas	230 18	
Albert Brackett, coal	103 91	
C. S. Pulsifer, rent of land for rifle range	50 00	
Water department, use of water . .	23 00	
C. A. Purdy, material and labor . .	26 60	
M. C. Higgins, material and labor . .	15 82	
		<hr/>
Total, as per item No. 2 of expenses	\$978 88	
Balance unexpended transferred into treasury	\$121 12	

Auburndale (Williams) School-house.

Paid W. H. Stewart, <i>et. al.</i> balance of contract, as per item No. 3 of expenses	\$779 67
---	----------

Auburndale Sub-Way.

Sylvester & Rowe, contract	\$6,000 00	
Boston & Albany Railroad, material and labor	560 92	
Water department, pipe, etc.,	12 31	
		<hr/>
Total, as per item No. 4 of expenses	\$6,573 23	

Books, Stationery and Printing.

Appropriation	\$2,150 00
George H. Pratt, printing auditor's report, etc.,	\$914 16
Fanning Printing Co., printing, etc.	427 38
Newton Graphic, printing and advertising	157 83
Rand, Avery & Co., printing, etc.	55 99
A. Mudge & Son, printing, etc.	46 25
Newton Transcript Pub. Co., printing etc.	35 00
Rice & Drake, printing, etc.	22 95
Rockwell & Churchill, printing	5 75
F. A. Searle, printing	3 50
F. D. Graves, printing	1 25
Charles H. Stacy, stamped envelopes, etc.	197 37
American Bank Note Co., check books	119 00
The Forbes Lithograph Man'f Co., lithographs, etc.	42 00
J. Q. Fuller, Boston Directories	35 00
George M. Dewing, rubber bands	13 13
Boston Daily Advertiser, subscription	12 00
H. C. Dimond & Co., stamps	7 95
I. F. Kingsbury, amount paid for books	5 25
J. Harris Reed, ink	3 50
Little, Brown & Co., book	2 85
J. D. F. Brooks, binding books	2 75
Drew, Allis & Co., Newton directory	1 50
Charles H. Jenison, expressage	55
Samuel Ward Co., supplies	91 66

Amount carried forward, \$2,204 57

<i>Amount brought forward,</i>		\$2,204 57
Ward & Gay, supplies	67 49	
A. R. Gay. & Co. supplies	15 00	
Francis Doane & Co., supplies	11 00	
Samuel Hobbs & Co., supplies	9 95	
A. L. Shipmans Sons', supplies	6 85	
E. B. Tarbell, supplies	6 00	
Hooper Lewis & Co., supplies	5 25	
Library bureau supplies	4 50	
	<hr/>	
Total, as per item, No. 5 of expenses		\$2,330 61
Balance overdrawn, transferred into treasury		\$180 61

Board of Health.

Appropriation		\$4,000 00
Transferred to City Engineer's department for services to health department by vote of board of health	534 64	
	<hr/>	\$3,465 36
Nathan Mosman, services as agent for board	\$ 800 00	
Nathan Mosman, sundry cash expenses	1 48	
William H. Mague, collecting house offal	1,200 00	
Dr. J. F. Frisbie, vaccinations	15 75	
Dr. F. E. Crockett, vaccinations	12 50	
Dr. James Utley, vaccinations	9 50	
Dr. Eben Thompson, vaccinations	4 75	
Stephen F. Cate, use of teams	49 00	
George W. Bush, use of teams	3 00	
	<hr/>	
<i>Amount carried forward</i>		\$2,095 98

<i>Amount brought forward, .</i>	\$2,095 98	
Fanning Printing Co., printing etc. .	32 75	
Thomas Groom & Co., supplies .	18 75	
W. B. Clark & Carruth, supplies .	5 84	
Samuel Ward Co., supplies . .	4 57	
J. L. Fairbanks & Co., supplies .	2 50	
George H. Ingraham, supplies .	1 40	
O. F. Lucas, supplies	1 18	
E. L. Walker, supplies	1 00	
Water department, material and labor	15 08	
C. G. Phillips, supplies	1 75	
John Murphy, burying dogs . .	3 00	
James Walton, burying dogs . .	1 00	
B. C. Kilbourne, burying dogs . .	1 00	
	<hr/>	
Total, as per item No. 6 of expenses .	\$2,185 80	
	<hr/>	
Balance unexpended transferred into treasury	\$1,279 56	

Burial Grounds.

Appropriation		\$400 00
Services of Henry Ross, sup't . .	\$200 00	
Forty-eight days work, (\$2 00 per day)	96 00	
Fifteen day's use of horse, (\$1 50 per day)	22 50	
Top-dressing soldiers' lot and part of city lot	25 00	
Lumber for repairing fence . .	50 25	
	<hr/>	
Total, as per item No. 7 of expenses . .	\$393 75	
	<hr/>	
Balance unexpended transferred into treasury	\$6 25	

Conveyance of Pupils.

Appropriation	\$450 00	
Transferred from appropriation for miscellaneous expenses	265 00	
Transferred from general appropria- tion for schools	90 00	
	<hr/>	\$805 00
Fred. B. Spear, conveyance as per item No. 8 of expenses	785 00	
	<hr/>	\$20 00
Balance unexpended transferred into treasury		

Curbing.

Appropriation	\$1,500 00	
John A. Kenrick, treasurer, labor, men and teams, highway department	\$659 23	
Noah Prescott, curb-stone	701 04	
B. & A. Railroad, freight	125 80	
B. F. Barlow, blacksmithing,	3 65	
John W. Scott, blacksmithing	3 18	
Thomas Belger, blacksmithing	3 10	
J. C. Farrar, blacksmithing	1 50	
Isaac Smith, material and labor	1 50	
Cobb, Bates & Yerxa, oatmeal	1 00	
	<hr/>	
Total, as per item No. 9 of expenses		\$1,500 00

City Hall Expenses.

Appropriation	\$1,600 00	
Newton and Watertown Gaslight Co., gas	\$636 99	
C. F. Eddy & Co., coal	265 42	
	<hr/>	
Amount carried forward,		\$902 41

<i>Amount brought forward</i> . . .		\$902 41
Almshouse department, wood . . .	10 00	
Water department, use of water . . .	77 00	
L. J. Kendall, ice	15 00	
J. D. Wellington, sundry cash ex- penses	338 30	
Goddard Gas Regulating Co., regula- tor	130 00	
The Germicid Co., material and labor	52 00	
H. H. Hunt, material and labor . . .	95 78	
J. W. Conroy & Son, material and labor	24 17	
W. H. French & Co., material and labor	28 43	
Christopher Needham, material and labor	28 00	
L. Nickerson, awnings	15 00	
J. & J. Dobson, carpet	29 00	
C. H. Jenison, expressage	16 22	
Newton Odorless Excavating Co., cleaning cesspool	7 50	
F. H. Smith, repairing clocks . . .	6 50	
E. L. & F. S. Rollins	5 00	
Cabot Bros. and Prescott	3 25	
A. & E. Burton & Co., feather duster	2 50	
S. A. White, cleaning carpet	2 08	
O. F. Lucas, material and labor . . .	15 26	
John S. Tuttle, material and labor . .	12 00	
C. S. Phillips, material and labor . .	6 75	
Joseph Zeller, material and labor . .	1 85	
Chas. A. Cole, material and labor . .	1 00	
Total, as per item No. 10 of expenses . .		\$1 825 00
Balance overdrawn transferred into treasury		\$225 00

City Engineer's Department.

Appropriation	\$6,750 00	
Transferred from appropriation for board of health	534 64	
	<hr/>	\$7,284 64
Albert F. Noyes, services as city engineer	\$2,100 00	
Fred H. Barnes, services as assistant city engineer	1,020 00	
William S. French, services as assis- tant city engineer	611 69	
I. W. Hastings, services as assistant city engineer	825 00	
W. P. Morse, services as assistant city engineer	645 00	
Arthur L. Woodruff, services as assist- ant city engineer	582 00	
Henry D. Woods, services as assistant city engineer	118 80	
Frank L. Preble, services as assistant city engineer	17 60	
Stephen Child, services as assistant city engineer	104 00	
David Hinckley, services as assistant city engineer	54 79	
Frank E. Fuller, services as assistant city engineer	58 95	
Incidental repairs, traveling expenses, etc., of engineer and assistants	384 31	
Charles G. Tinkham, horse	205 00	
	<hr/>	
<i>Amounts carried forward, .</i>	\$6,727 14	\$7,284 64

<i>Amounts brought forward,</i> .	\$6,727 14	\$7,284 64
Charles G. Tinkham, keeping horse, etc.	210 43	
Kimball Bros., wagon	115 00	
P. A. McVicar, sleigh, etc. . .	57 85	
Hill & Langtry, harness . . .	45 00	
Chandler & Farquhar, supplies .	39 87	
Frost & Adams, supplies . . .	10 12	
Buff & Burger, supplies . . .	9 33	
Stephen F. Cate, use of teams .	26 00	
D. Appleton & Co., books . . .	21 00	
M. Frank Lucas, stakes	10 65	
Alexander Wadsworth, services .	5 00	
J. Carroll, material and labor .	2 15	
Andrew Peters, shoeing horse .	1 75	
Johnson & Keyes, expressage . .	1 00	
C. H. Jenison, expressage . . .	85	
A. R. Gay & Co., supplies . . .	65	
Total, as per item No. 11 of expenses .		\$7,283 79
Balance unexpended transferred into treasury		85

Drains and Culverts.

Appropriation	\$12,000 00	
Transferred from city treasury per order of city council on account of drain in Melrose street \$2,400 00, Eldredge street \$325 00, Tremont street \$78 75	2,803 75	
<i>Amount carried forward,</i> .		\$14,803 75

<i>Amount brought forward.</i>	\$14,803 75
John A. Kenrick, treas., labor, men, and teams, highway dept.	\$8,717 57
O. F. Lucas, drain pipes, etc.	1,751 66
F. E. Hamblin, drain pipes, etc.	829 98
M. W. Sands, brick	997 42
H. W. Clapp & Co., sewer-caps, etc.	389 95
Noah Prescott, stone	312 00
C. F. Eddy & Co., cement	207 75
Waldo Bros., cement	171 18
Pettee Machine Works, material and labor	179 38
W. H. Leatherbee & Son, lumber	176 63
G. Fuller & Son, lumber	25 11
Alfred Fitzpatrick, lumber, etc.	48 89
David Jackson, stone	140 00
R. M. Gill, stone	10 00
Boston & Albany Railroad, freight	125 16
N. Y. & N. E. Railroad, freight	90 00
Ætna Rubber Mills, rubber boots	92 52
D. J. O'Donnell, blacksmithing	47 91
P. A. McVicar, blacksmithing	42 40
A. Danforth, ag't, blacksmithing	38 03
Murray & Farrell, blacksmithing	36 18
John W. Scott, blacksmithing	16 80
Andrew Peters, blacksmithing	3 20
Charles A. Cole, blacksmithing	2 45
Thomas Belger, blacksmithing	1 00
J. C. Farrar, blacksmithing	95
M. Frank Lucas, stakes	33 35
Water department, material and labor	32 91

Amount carried forward. . \$14,520 38

<i>Amount brought forward, .</i>		\$14,520 38
Staples Bros., grate covers . . .	32 40	
George A. Goodyear, powder . . .	32 25	
W. H. Emery, part expense of drain	25 00	
Davis & Farnum Mf'g Co., castings	24 59	
Hopkinson & Madden, oak pails .	18 00	
Maverick Oil Co., oil	13 21	
George W. Judd, services on account of help	7 45	
George F. Cochmower & Co., supplies	5 00	
Chandler & Farquhar, steel tapes .	5 76	
J. Q. Harrington, filing saws . . .	3 00	
Cobb, Bates & Yerxa, oatmeal . . .	3 00	
Albert F. Noyes, sundry cash ex- penses	2 80	
William Petigrew, material and labor	12 10	
W. L. Smith, material and labor . .	10 95	
Isaac Smith, material and labor . .	3 66	
Allen Jordan, material and labor . .	3 46	
T. F. Glennan, material and labor .	2 15	
Edson Mf'g Co., supplies	34 91	
Barber Bros., supplies	13 16	
S. O. Thayer & Co., supplies . . .	2 95	
Sundry small bills	3 45	
Total, as per item No. 12 of expenses . . .		\$14,779 63
Balance unexpended transferred into treasury .		\$24 12

Evening Schools.

Appropriation		\$550 00
Levi F. Warren, teacher	\$72 00	
<i>Amounts carried forward, . . .</i>	\$72 00	\$550 00

<i>Amount brought forward,</i> .	\$72 00	
Herbert E. Thayer, teacher . .	39 00	
John E. Cummings, teacher . .	33 00	
Charlotte N. Wilkins, teacher . .	46 50	
Emma B. Wilkins, teacher . .	46 50	
Lulu M. Bagley, teacher . . .	46 50	
Ethel Cushing, teacher . . .	45 00	
Sarah Hopkinson, teacher . . .	44 00	
George M. Weed, teacher . . .	18 00	
Frank H. Noyes, teacher . . .	18 00	
Martha M. Dix, teacher . . .	13 50	
Anastasia Peters, teacher . . .	13 50	
Nellie P. Warren, teacher . . .	12 00	
Rose A. Harkins, teacher . . .	12 00	
Esther E. Barry, teacher . . .	7 50	
Hanorah Sweeney, teacher . . .	6 75	
Ellen S. Doherty, teacher . . .	6 00	
John McCamman, janitor . . .	16 50	
Newton and Watertown Gas Light Co., gas	16 20	
George H. Pratt, advertising . .	9 75	
Newton Graphic, advertising . .	5 63	
Adams & Ingraham, supplies . .	5 15	
Total, as per item No. 13 of expenses .	\$532 98	
Balance unexpended transferred into treasury	\$17 02	
Fire Department.		
Appropriation	\$26,000	
Transferred from appropriation miscellaneous expenses by order of city council . . .	125 00	
<i>Amount carried forward,</i> . . .		\$26,125 00

<i>Amount brought forward,</i>		\$26,125 00
Henry L. Bixby, chief of department	\$1,500 00	

STEAMER NO. 1.

F. E. Judkins, engineer	\$950 00
H. C. Lindley, substitute engineer	36 54
John Deary driver	750 00
John Deary, driver 3 days in 1885	8 24
Walter Pingree, substitute driver	28 84
H. C. Lindley, stoker	91 67
F. D. Graves, foreman	110 00
C. W. H. Boulton, assistant foreman and secretary	105 00
R. J. Morrissey, hoseman	100 00
F. W. Lyons, hoseman	100 00
J. F. Horrigan, hoseman	100 00
Walter Pingree, hoseman	100 00
John McCammon, hoseman	100 00
Archibald R. Carley, hoseman	100 00
B. F. Tripp, substitute hoseman vacation	8 33

 \$2,688 62
Am'ts carried forw'd,

 \$4,188 62

 \$26,125 00

Am'ts brought forw'd, \$4,188 62 \$26,125 00

STEAMER NO. 2.

R. S. Cummins, en-	
gineer . . .	\$950 00
H. C. Lindley, substi-	
tute engineer .	36 54
C. L. Berry, driver .	750 00
R. J. Riley, substitute	
driver . . .	28 84
G. K. Stacy, stoker .	100 00
George H. Haynes, fore-	
man . . .	110 00
F. H. Humphrey, assis-	
tant foreman and	
secretary . .	105 00
J. Q. A. Hawkes, hose	
man . . .	100 00
H. W. Nicholl, hoseman	100 00
Joseph Cummins, hose-	
man . . .	100 00
C. M. Kebbe, hoseman	100 00
R. J. Riley, hoseman	95 83
P. E. Ellis, hoseman	75 00
W. F. Rand, hoseman	25 00
A. Woodside, hoseman	4 17

\$2,680 38

Amts carried forwd,

\$6,869 00 \$26,125 00

Am'ts brought forw'd, \$6,869 00 \$26,125 00

STEAMER NO. 3.

A. D. Colby, engineer	\$950 00
John Foley, substitute engineer . . .	36 54
A. C. Jewett, driver	750 00
C. E. Thompson, substi- tute driver . . .	28 84
Charles A. Peck, stoker	100 00
Charles A. Peck, stoker, balance due 1885	19 79
A. I. English, foreman	110 00
S. F. Chadbourne, assis- tant foreman and secretary . . .	105 00
C. B. Garey, hoseman	100 00
D. McDonald, hoseman	109 00
C. J. Polley, hoseman	100 00
J. McMahon, hoseman	100 00
C. E. Thompson, hose- man . . .	95 83
A. A. Mosher, hoseman	50 00
Bernard McDonald, hoseman . . .	4 17
A. A. Mosher, hoseman	4 17

\$2,654 34

Am'ts carried forw'd,

\$9,523 34

\$26,125 00

Amounts brought forward, \$9,523 34 \$26,125 00

HOOK AND LADDER NO. 1.

Charles Murphy, driver	\$750 00
Lewis P. Watson, substitute driver . . .	28 84
F. Lancaster substitute driver . . .	12 36
W. S. Higgins, foreman	110 00
F. B. Sisson, assistant foreman and secretary . . .	105 00
J. H. Williams, ladderman . . .	100 00
O. Dow, ladderman .	100 00
T. C. Nickerson, ladderman . . .	100 00
H. J. Williams, ladderman . . .	100 00
J. Beal, ladderman .	100 00
C. Coleman, ladderman	100 00
U. H. Dyer, ladderman	100 00
J. F. Horrigan, ladderman . . .	100 00
J. Watt, ladderman .	100 00
M. McLeod, ladderman	100 00

\$2,006 20

Amounts carried forward,

\$11,529 54 \$26,125 00

Amounts brought forward, \$11,529 54 \$26,125 00

HOSE COMPANY NO. 4.

J. E. Watson, driver	\$600 00	
Lewis P. Watson, sub-		
stitute driver	22 82	
E. C. Waterhouse, fore-		
man	110 00	
A. J. Wandless, assis-		
tant foreman and		
secretary	105 00	
Daniel Archibald, hose-		
man	100 00	
F. A. Dexter, hoseman	100 00	
F. D. Lancaster, hose-		
man	100 00	
		\$1,137 82

HOSE COMPANY NO. 5.

J. F. Washburn, fore-		
man	\$110 00	
J. U. Kimball, assistant		
foreman and secre-		
tary	105 00	
John Frost, hoseman	100 00	
J. M. Taylor, hoseman	100 00	
C. G. Fletcher, hoseman	100 00	
W. C. Spaulding, hose-		
man	100 00	
		\$615 00

<i>Amounts carried forward,</i>	\$13,282 36	\$26,125 00
---------------------------------	-------------	-------------

Amount brought forward, . \$13,282 36 \$26,125 00

HOSE COMPANY NO. 5.

Bernard Early, fore-	
man . . .	\$110 00
H. H. Miles, assistant	
foreman and secre-	
tary . . .	105 00
D. J. Corcoran, hoseman	100 00
P. E. O'Neil hoseman	100 00
D. J. Cooney, hoseman	100 00
T. E. Haley, hoseman	100 00
	<hr/>
	\$615 00

HOSE COMPANY NO. 7.

W. S. Cargill, foreman	\$110 00
Harley A. Smith, assis-	
tant foreman and	
secretary . . .	105 00
J. E. Trowbridge, hose-	
man . . .	100 00
J. T. Thomason, hose-	
man . . .	100 00
C. E. Rand, hoseman .	100 00
G. H. Osborne, hose-	
man . . .	100 00
B. W. Polley, hoseman	45 83
	<hr/>
	\$660 83
20 Firemen, extra services, July 4th	60 00
	<hr/>
<i>Amounts carried forward,</i> . .	\$14,618 19 \$26,125 00

Amts brought forw'd, \$14,618 19 \$26,125 00

Repairs, Supplies and Incidentals.

S. F. Hayward & Co. Chemical		
Engine	\$2,000 00	
E. Ham & Co., horse	275 00	
Gutta Percha & Rubber Co., new		
hose	800 00	
Gutta Percha & Rubber Co. re-		
lining hose	364 33	
E. Smead & Co., grain	896 47	
H. W. Crowell, grain	686 14	
N. W. Tupper, grain	450 06	
George E. Johnson, grain . . .	225 00	
Albert Brackett, grain	223 40	
C. F. Eddy & Co, grain	202 65	
Albert Brackett, coal and wood .	532 46	
C. F. Eddy & Co., coal and wood	304 07	
Hills, Bullens & Co., wood . .	5 50	
Newton Coal Co., wood	5 50	
Newton & Watertown Gas Light		
Co., gas	357 31	
Water Department, use of water	201 00	
Madison Bunker, attendance upon		
sick horses	185 14	
J. R. McLaughlin, attendance		
upon sick horses	31 00	
P. A. McVicar, repairing hose		
carriage No. 5, etc.	152 75	
Murray & Farrell, blacksmithing	152 98	
J. C. Farrar, blacksmithing . .	107 70	
Andrew Peters, blacksmithing .	85 46	

Amts carried forw'd, 22,862 11 \$26,125 00

<i>Amounts brought forward,</i>	\$22,862 11	\$26,125 00
B. F. Barlow, blacksmithing .	73 66	
Thomas Belger, blacksmithing .	22 00	
Charles A. Cole, blacksmithing .	19 00	
John W. Scott, blacksmithing .	2 25	
Waltham Steam Laundry, laundry work	75 50	
Charles Murphy, laundry work .	37 25	
Mrs. Margaret Smith, laundry work	28 68	
Mrs. Thomas Purcill, laundry work	25 03	
Mrs. Julia Buttrick, laundry work	19 20	
B. McFaden, use of horses .	84 00	
Timothy Stuart, use of horses .	47 26	
W. H. Mague, use of horses .	38 50	
J. O. Watson, use of horses .	30 62	
Stephen F. Cate, use of horses .	30 00	
W. H. Thompson, use of horses	24 00	
C. McBride, use of horses . . .	21 88	
John Joyce, use of horses . . .	18 38	
S. L. Pratt, use of horses . . .	16 25	
Central Stables, use of horses .	15 75	
Charles H. Hale, use of horses .	10 50	
Dennis Leahy, use of horses .	10 50	
John Hackett, use of horses .	8 75	
Thomas F. Mague, use of horses	4 38	
Nonantum Stables, use of horses	2 00	
F. H. Hunting, use of horses .	1 75	
B. & A. Railroad, freight, etc.	87 09	
N. Y. & N. E. Railroad, freight .	2 09	
<i>Amounts carried forward, .</i>	<hr/> \$23,618 38	<hr/> \$26,125 00

<i>Amounts brought forward,</i>	\$23,618 38	\$26,125 00
J. E. Trowbridge, services exercising horse, Hose No. 7, etc.	76 36	
W. H. Wilson, fire hats . . .	59 25	
Am. Fire Hose Man'f Co., hose, etc.	30 87	
Rhode Island Coupling Co., hose, etc.	18 25	
George M. Dewing, hose . . .	8 00	
Page & Coffin, buffalo robe .	25 00	
Boston Electric Time Co., rental of Electric dial	24 00	
Boston Belting Co., suction hose, etc.	23 60	
Edwin Rogers, wire, etc., . . .	23 41	
H. L. Bixby, sundry cash expenses	20 37	
Putnam & Co., mattresses . . .	19 25	
W. C. Smith, saddle pieces, etc.	18 00	
L. Barber, Jr., brooms	16 75	
M. G. Crane, wood	16 00	
Charles E. Berry, double hangers, etc.	12 00	
Speare, Gregory & Co., oil . . .	10 52	
Peck, Whipple, & Co., whips . .	9 00	
O. B. Leavitt, material and labor	7 72	
F. E. Jenison, soap	7 25	
A. W. Mitchell, checks for keys	7 20	
Frank Edmands, sundry cash expenses	6 00	
J. N. Danforth, horse salve . .	6 00	
<i>Amounts carried forward,</i>	<hr/> \$24,063 18	<hr/> \$26,125 00

<i>Amounts brought forward, .</i>	\$24,063 18	\$26,125 00
Mrs. J. E. Watson, repairing fire coats	6 00	
James Humphrey, labor, etc. on carpet	6 00	
W. B. Randlett, sundry cash expenses	5 95	
F. D. Graves, printing cards, etc.	6 00	
C. Seaver, Jr., photograph of fire	5 00	
Lloyd Bros., cleaning carpet .	4 86	
Kendall & Roberts, testing boiler	4 75	
Newton Odorless Excavating Co., cleaning vault	2 50	
J. F. Horrigan, labor on steamer	3 50	
Bernard McDonald, labor . . .	2 00	
Mrs. L. Jones, cleaning floor .	2 00	
E. S. Colton, repairing clock .	2 00	
Dr. W. O. Hunt, medical attendance, C. Murphy	1 50	
A. E. Bartlett, curry-combs .	1 50	
Jenison's Express, expressage .	20 85	
E. Jones' Express, expressage .	3 15	
W. B. Beals, expressage . . .	1 60	
Johnson & Keyes, expressage .	1 50	
Eames' Express, expressage .	1 15	
George L. Pearson, expressage .	1 00	
J. Carroll, material and labor .	48 62	
F. H. Humphrey, agt., material and labor	24 06	
H. H. Hunt, material and labor	21 58	
Joseph Zeller, material and labor	20 38	
<i>Am'ts carried forward,</i>	<hr/> \$24,260 63	<hr/> \$26,125 00

<i>Am'ts carried forw'd,</i>	\$24,260 63	\$26,125 00
George Fuller, material and labor	18 63	
William Welsh, material and labor	16 92	
E. W. Hodgson, material and labor	11 10	
D. W. Brownell, material and labor	9 65	
Higgins & Nickerson, material and labor	7 12	
Charles W. Trainer & Co., material and labor	5 20	
Whittier Machine Co., material and labor	4 61	
J. Hutchins & Co., material and labor	4 35	
H. D. Hicks & Son, material and labor	5 25	
W. F. Rand, material and labor	3 75	
D. J. Cooney, material and labor	2 25	
D. F. Healey, material and labor	2 00	
Robbins & Healey, material and labor	1 50	
A. D. Lougee, ice	6 00	
George H. Ellis, ice	5 00	
Howard Bros., ice	3 60	
R. J. Riley, removing snow from hydrants	10 50	
J. L. Randall, removing snow from hydrants	5 25	
P. E. Ellis, removing snow from hydrants	5 25	
<i>Amounts carried forward,</i>	<u>\$24,388 56</u>	<u>\$26,125 00</u>

<i>Amounts brought forward,</i> .	\$24,388 56	\$26,125 00
Walter Pingree, removing snow from hydrants	1 75	
H. C. Lindley, removing snow from hydrants	1 75	
A. Carley, removing snow from hydrants	1 75	
G. K. Stacy, removing snow from hydrants	1 75	
A. A. Mosher, removing snow from hydrants	1 75	
J. F. Washburn, removing snow from hydrants	1 75	
D. J. Cooney, removing snow from hydrants	1 75	
Edward E. Rice & Co., supplies	85 73	
C. F. Hovey & Co., supplies .	33 50	
Charles F. Shrouds & Co., sup- plies	32 00	
H. E. Woodberry, supplies .	16 02	
H. W. Wellington, supplies .	10 39	
J. Hinman, Agt., supplies .	13 55	
Ordway, Kimball & Loring sup- plies	10 50	
Barber Bros., supplies . .	10 27	
G. H. Ingraham, supplies . .	9 09	
I. R. Stevens, supplies . .	8 13	
George L. Baxter, supplies .	7 20	
C. W. Sabine, supplies . .	6 01	
Arthur Hudson, supplies . .	5 80	
<i>Amounts carried forward,</i>	<hr/> \$24,649 00	<hr/> \$26,125 00

<i>Am'ts brought forw'd,</i>	\$24,649 00	\$26,125 00
Thayer, Babson & Co., supplies .	5 50	
I. H. Snow, supplies	5 40	
S. O. Thayer & Co., supplies .	5 05	
Fire Extinguisher Man'f Co., sup- plies	5 00	
Joseph Lee, supplies	4 50	
L. H. Roach, supplies	3 75	
B. F. Houghton, supplies . . .	3 61	
J. J. Noble, supplies	3 00	
Hill & Langtry, supplies . . .	3 00	
Wheeler & Gurney, supplies . .	2 50	
Sherman & Co., supplies	2 70	
H. B. Coffin, supplies	2 30	
S. W. Fuller & Holtzer, supplies	1 75	
Peter Gray, supplies	1 60	
C. F. Rogers, supplies	1 50	
W. C. Gaudalet, supplies	1 35	
A. Whitney, supplies	1 28	
F. Murdock & Co., supplies . .	1 00	
E. L. & F. S. Rollins, supplies .	1 00	
Sundry small bills	4 89	
	<hr/>	
	\$24,709 68	

Fire Alarm Telegraph.

W. B. Randlet, assistant chief and fire alarm telegraph operator	\$1,000 00		
W. B. Randlett, sundry cash expenses	30 00		
	<hr/>	<hr/>	<hr/>
<i>Am'ts carried forw'd</i>	\$1,030 00	\$24,709 68	\$26,125 00

<i>Am'ts brought forward,</i>	\$1,030 00	\$24,709 68	\$26,125 00
Abbot Downing Co.,			
wagon . . .	195 00		
Edward E. Rice & Co.,			
vitriol . . .	137 00		
Edwin Rogers, fire			
alarm signal box,			
etc.	133 43		
Abiel Pevey, zincs .	99 41		
B. & A. Railroad, freight	83 24		
Washburn & Moen Mf'g			
Co., wire etc. .	70 94		
Brownlee & Co., tele-			
graph poles .	66 64		
Almshouse department,			
telegraph poles .	27 50		
Charles L. Bly, sup-			
plies	20 54		
P. A. McVicar, repairs			
on pung	20 15		
S. L. Pratt, use of horse	16 50		
M. Frank Lucas, sup-			
plies	11 15		
Charles A. Cole, ma-			
terial and labor .	11 00		
Adam Beck, material			
and labor . . .	5 88		
C. S. Phillips, material			
and labor . . .	4 78		
The Pettee Machine			
Works material			
and labor . . .	2 55		
<i>Am'ts carried forw'd,</i>	<u>\$1,935 71</u>	<u>\$24,709 68</u>	<u>\$26,125 00</u>

<i>Am'ts brought forward,</i>	\$1,935 71	\$24,709 68	\$26,125 00
N. and W. Gas Light Co., gas . . .	7 18		
John McDonald, labor on fire alarm tele- graph . . .	35 00		
John Sullivan, labor on fire alarm telegraph	12 25		
Charles A. Peck, labor on fire alarm tele- graph . . .	6 50		
L. Cameron, labor on fire alarm tele- graph . . .	6 25		
William Sullivan, labor on fire alarm tele- graph . . .	8 75		
John Foley, labor on fire alarm tele- graph . . .	6 88		
Timothy O'Leary, labor on fire alarm tele- graph . . .	5 25		
Michael Ryan, labor on fire alarm tele- graph . . .	5 25		
James Mague, labor on fire alarm tele- graph . . .	5 25		
James Murphy, labor on fire alarm tele- graph . . .	5 25		
<i>Am'ts carried forw'd,</i>	<u>\$2,039 52</u>	<u>\$24,709 68</u>	<u>\$26,125 00</u>

<i>Am'ts brought forward,</i>	\$2,039 52	\$24,709 68	\$26,125 00
Thomas Green, labor on fire alarm tele- graph	4 38		
Patrick Kelly, labor on fire alarm tele- graph	1 75		
George Fuller, labor on fire alarm tele- graph	1 35		
A. I. English, labor on fire alarm tele- graph	1 25		
Sundry small bills .	1 49		
	<hr/>		
		\$2,049 74	
Total, as per item No. 14 of expenses .		\$26,759 42	
		<hr/>	
Balance overdrawn transferred into treasury		\$634 42	

Funded Debt.

Paid to city institution for sav- ings, Lowell, Town of New- ton, note 6 per cent., due Oct. 3, as per item No. 15 of expenses	\$20 000 00
--	-------------

Funded Debt, Schoolhouse Note.

Paid to Lynn Institution for sav- ings, note 4 per cent., due Jan. 25, as per item No. 16 of expenses	\$5,150 00
--	------------

Gravel Land.

Appropriation	\$2,000 00	
Transferred from treasury per order of city council for land from which gravel has been removed	567 00	
		<u>\$2,567 00</u>
Heirs of G. J. Carleton, land on Murray street	\$1,000 00	
Mrs. Dennis O'Donnell, gravel, River street	100 00	
Leonard Hurd, gravel	73 00	
Charles Pulsifer, gravel	40 70	
D. C. Carter, use of land, for gravel	14 82	
F. E. Hamblin, sand	14 25	
Patrick Shea, sand	9 20	
Mrs. Taylor, gravel	5 10	
John Martin, gravel	2 50	
		<u>\$1,259 57</u>
Total, as per item No. 17 of expenses		<u>\$1,307 43</u>
Balance unexpended transferred into treasury		\$1,307 43

Highways, General Repairs.

Appropriation	\$55,000 00	
Additional appropriation by order of city council	10,000 00	
Amounts transferred from city treasury by order of city city council, as follows:		
Received from the citizens of		
<i>Amounts carried forward, .</i>	<u>\$65,000 00</u>	

<i>Amount brought forward,</i>	\$65,000 00
Auburndale on account of construction of sub-way under track of Boston & Albany railroad	2,000 00
Received from Boston & Albany Railroad Corporation on account of construction of sub-way as above	600 00
Received from Town of Needham one half expense for construction of bridge over Charles River at Nahanton street	550 00
Received from Town of Quincy for use of steam road roller	450 00
Received from Roger Sullivan for land on Cook street from which gravel had been removed	238 80
Received from Newtonville Improvement Society on account of improvements in Newtonville square	82 52
Received from Boston Fire Brick Co. for old stone crusher engine	75 00
Received from Town of Brookline for use of steam road roller	60 00
Received from Levi B. Gay for drain under drive-way	25 00
<i>Amount carried forward,</i>	<hr/> <hr/> \$69,081 32

<i>Amount brought forward,</i>		\$69,081 32
William E. Fuller, services as superintendent of streets .	1,500 00	
William E. Fuller, sundry cash expenses	7 50	
John J. Ware, assistant superin- tendent of streets . . .	926 50	
John A. Peck, assistant superin- tendent of streets . . .	926 50	
George E. Stuart, assistant superintendent of streets .	1,054 63	
Samuel M. Jackson, assistant superintendent of streets .	58 50	
John A. Kenrick, treasurer, am- ount paid laborers on dis- charge tickets	2,550 27	
John A. Kenrick, treasurer, am- ount paid laborers upon high- ways, as per pay rolls . .	41,093 24	
W. H. Thompson, horses and ex- change of horses . . .	1,322 00	
Simpson Bros., concreting .	2,672 24	
Water department, use of water	294 02	
E. Smead & Co., grain . . .	512 81	
H. W. Crowell, grain . . .	320 24	
N. W. Tupper, grain . . .	253 83	
Albert Brackett, grain . . .	170 21	
George E. Johnson, grain . .	168 60	
C. F. Eddy & Co., grain . . .	148 27	
Nathan Haynes, hay . . .	588 72	
Almshouse department, hay .	274 55	
<i>Amounts carried forward,</i>	\$54,842 63	\$69,081 32

<i>Amounts brought forward, .</i>	\$54,842 63	\$69,081 32
Bartlett & Brooke, hay . .	197 56	
N. W. Tupper, hay . . .	194 10	
C. H. Reed, hay . . .	182 67	
David Hall, hay . . .	170 37	
C. F. Eddy & Co., hay . .	169 78	
Charles A. Warren, hay . .	132 20	
Henry Stone, hay . . .	115 90	
E. Smead & Co., hay . . .	95 94	
William Dix, hay . . .	88 11	
Jeffrey Connell, hay . . .	68 47	
Henry D. Parmenter, hay . .	57 39	
James Nickelson, hay . .	56 14	
Frank E. Cook, hay . . .	48 05	
N. B. Douglas, hay . . .	41 76	
Mrs. C. H. Darling, hay . .	30 80	
John Burke, hay . . .	14 83	
Albert Brackett, straw . .	184 02	
C. F. Eddy & Co., straw . .	130 95	
N. W. Tupper, straw . . .	116 49	
H. W. Crowell, straw . . .	90 32	
E. Smead & Co., straw . .	50 60	
Alms-house department, straw .	44 50	
George E. Johnson, straw .	24 01	
Samuel M. Jackson, straw .	19 57	
Dwight Chester, straw . .	16 92	
William A. Norton building bridge Nahanton street .	1,100 00	
James E. Cahill, abutment for bridge Nahanton street .	247 00	
<i>Amounts carried forward, .</i>	<hr/> \$58,531 08	<hr/> \$69,081 32

<i>Amounts brought forward,</i>	\$58,531 08	\$69,081 32
William D. Butts, land on Oak and Needham streets	700 00	
William M. Hawes, portable boiler, etc.	478 00	
M. W. Sands, brick	503 60	
Arthur Muldoon, building bank wall	500 00	
John Pulcifer, new carts, etc.	434 30	
H. M. Darling & Co., tools, etc.	495 53	
Bradlee Hastings & Co., tools, etc.	230 12	
Adam Beck, foot bridge, Lower Falls	350 00	
John J. Ware, use of horse and carriage	200 00	
John A. Peek, use of horse and carriage	100 00	
J. R. McLaughlin, care of sick horses	189 00	
H. Gore & Co., paving stone	227 18	
Noah Prescott, stone	109 55	
George F. Works, chestnut posts	228 88	
George A. Goodyear, powder, etc.	171 50	
Rockwell & Mosely, powder, etc.	38 00	
Boston & Albany railroad, freight	114 00	
New York & New England rail- road, freight	9 00	
Waldo Bros., cement	97 20	
James Forgie & Son, blankets	93 25	
Sewall & Day Cordage Co., manilla, etc.	66 09	
<i>Amounts carried forward,</i>	<hr/> \$63,866 28	<hr/> \$69,081 32

<i>Amounts brought forward,</i>	\$63,866 28	\$69,081 32
Samuel M. Jackson, labor, men and teams	62 33	
Newton & Watertown Gas Light Co., gas	56 48	
F. E. Hamblin, drain pipe . . .	43 50	
William H. Buston, horse collars	26 00	
Bagnall & Loud Block Co., repair- ing block, etc.	23 10	
E. H. Mulliken & Co., cotton waste	36 01	
Gilkey & Stone, lumber . . .	32 30	
George Hammell, wood . . .	19 50	
Priest, Page & Co., scales . . .	19 80	
John Shorton, sods	16 63	
George Matthews & Co., cover- ings	16 37	
M. Bunker, care of sick horses .	15 50	
Leander Barber jr., brooms . .	15 50	
Dyer, Taylor & Co., grey robe	12 00	
Town of Wellesley, one half ex- pense repairing bridge . . .	10 48	
Mary E. Woodford, repairing fence	10 00	
Richard Stanley, horse liniment	9 00	
W. E. Church & Co., lifting jacks	9 00	
Cobb, Bates & Yerxa, oatmeal .	8 00	
A. M. Gouch, facing hammers .	7 50	
Pierce O'Connell, weighing stone	7 05	
James Hennessey, gravel screen .	7 00	

<i>Amounts carried forward,</i>	\$64,329 33	\$69,081 32
---------------------------------	-------------	-------------

<i>Am'ts brought forw'd,</i>	\$64,329 33	\$69,081 32
American Spiced Food Co., spiced food	7 00	
Quincy Harrington, filing saws .	5 75	
Davis & Farnum Man'f'g Co., castings	5 52	
Ambrose Belting Co., belting .	4 51	
J. N. Danforth, horse salve .	3 00	
George E. Stuart, sundry cash ex- penses	2 87	
John McCamman, rubber boots	2 75	
Alfred Fitzpatrick, lumber . .	2 50	
L. A. Gammans, oil can . . .	2 50	
C. McBride, use of sled . . .	2 00	
J. C. Farrar, blacksmithing .	539 65	
Murray & Farrell, blacksmithing	456 72	
Thomas Belger, blacksmithing .	434 27	
Andrew Peters, blacksmithing .	420 19	
A. Danforth, Agt., blacksmithing	177 91	
B. F. Barlow, blacksmithing .	150 06	
John W. Scott, blacksmithing .	114 10	
Chas. A. Cole, blacksmithing .	92 75	
D. J. O'Donnell, blacksmithing .	76 51	
Chas. H. Daniels, blacksmithing	66 34	
P. A. McVicar, blacksmithing .	52 90	
Isaac Smith, material and labor	347 03	
T. F. Glennan, material and labor	175 60	
S. D. Geary, material and labor .	167 30	
J. Carroll, material and labor .	158 22	
C. S. Phillips, material and labor	120 56	
 <i>Amounts carried forward, .</i>	 \$67,917 87	 \$69,081 32

<i>Amounts brought forward, .</i>	\$67,917 87	\$69,081 32
J. O. Evans' Sons, material and labor	89 51	
W. L. Smith, material and labor	85 87	
E. W. Hodgson, material and labor	79 60	
D. W. Brownell, material and labor	78 75	
Pettee Machine Works, material and labor	48 80	
William Petigrew, material and labor	47 85	
H. L. White, material and labor	41 75	
George Spring, material and labor	26 52	
A. W. Snow, material and labor	23 08	
P. Y. Hoseason, material and labor	22 35	
George Fuller, material and labor	22 25	
P. Carbry, material and labor,	22 00	
R. J. Morrissey, material and labor	19 60	
Kendall & Roberts, material and labor	19 26	
Allen Jordan, material and labor	16 55	
R. J. Gilfeather, material and labor	13 80	
William Johnson, material and labor	12 35	
F. H. Humphrey, Agt., material and labor	11 87	
L. A. Ross, material and labor	9 60	
<i>Amounts carried forward,</i>	<hr/> \$68,609 23	<hr/> \$69,081 32

<i>Amounts brought forward,</i>	\$68,609 23	\$69,081 32
O. B. Leavitt, material and labor	9 45	
W. H. French & Co., material and labor	9 25	
W. F. Rand, material and labor .	8 40	
V. Haffermehl, material and la- bor	8 32	
Cranitch & Horrigan, material and labor	4 10	
Higgins & Nickerson, material and labor	4 00	
James Ford, material and labor .	3 00	
Adam Beck, material and labor	3 00	
Edward Pike, material and labor	2 75	
J. C. Newcomb, material and la- bor	2 50	
Moses G. Crane, material and la- bor	1 95	
M. C. Higgins, material and labor	1 50	
Albert Brackett, coal and wood .	138 87	
C. F. Eddy & Co., coal and wood	133 82	
Cousens Bros., coal and wood .	132 31	
James Nickelson, coal and wood	54 34	
J. W. Mitchell, coal and wood .	34 25	
George Warren & Co., coal and wood	25 95	
Hills, Bullens & Co., coal and wood	5 75	
Vacuum Oil Co., oil	55 70	
Maverick Oil Co., oil	49 89	
Butchers' Slaughtering and Melt- ing Association, oil . . .	17 25	
<i>Am'ts carried forward,</i>	<u>\$69,315 58</u>	<u>\$69,081 32</u>

<i>Amounts brought forward, .</i>	\$69,315 58	\$69,081 32
Stephen F. Cate, use of teams .	79 62	
Wm. H. Mague, use of teams .	21 50	
Daniels' Nonantum Stables, use of teams	10 50	
Chas. G. Tinkham, use of teams	3 00	
John Purcell, use of team . .	2 50	
George W. Bush, use of team .	1 00	
John McCarty, use of horse .	34 00	
Timothy Stuart, use of horse .	18 00	
Harris' Express, use of horse .	4 00	
George H. Ellis, use of horse .	3 00	
C. H. Hurd, expressage . .	16 25	
C. H. Jenison, expressage . .	15 05	
E. Jones, expressage . . .	10 60	
Fife's Express, expressage . .	2 30	
Wm. C. Oastler, supplies . .	59 00	
Barber Bros., supplies . .	36 44	
Geo. H. Ingraham, supplies .	33 91	
S. O. Thayer & Co., supplies .	30 98	
G. P. Atkins, supplies . .	18 89	
Walworth Manf. Co., supplies .	18 72	
American Fire Hose Manf. Co., supplies	16 25	
B. F. Houghton, supplies . .	11 21	
Ames Plow Co., supplies . .	10 77	
W. O. Knapp & Co., supplies .	10 41	
J. E. Trowbridge, supplies .	9 63	
C. F. Rogers, supplies . .	7 80	
A. K. Richmond, supplies . .	7 50	
<i>Amounts carried forward,</i>	<hr/> \$69,808 41	<hr/> \$69,081 32

<i>Am'ts carried forw'd,</i>	\$69,808 41	\$69,081 32
Thomas Hollis, supplies . . .	7 00	
Isaac H. Snow, supplies . . .	5 88	
Farrell Foundry & Machine Co., supplies	5 88	
H. W. Fanning & Son, supplies .	5 84	
Thos. B. Adams & Co., supplies	5 50	
B. Billings, supplies	5 35	
Chas. W. Sabin, supplies . . .	5 25	
F. C. Morgan, supplies	4 15	
Chas. Murphy, supplies	4 00	
George H. Sampson, supplies .	3 65	
Wm. C. Gaudalet, supplies . .	3 63	
A. A. Savage, supplies	3 17	
Chas. A. Seabury, supplies . .	2 25	
H. A. Sherman, supplies . . .	2 08	
A. J. Fiske & Co., supplies . .	1 95	
J. J. Noble, supplies	1 52	
J. H. Sheridan, supplies	1 50	
H. W. Wellington, supplies . .	1 50	
J. W. Davis & Co., supplies . .	1 42	
Dodge, Haley & Co., supplies .	1 39	
C. W. Morehouse, supplies . . .	1 25	
W. P. Holden, supplies	1 06	
William Dix, supplies	1 00	
Sundry small bills	8 72	
Total as per item No. 18 of ex- penses		\$69,893 35
Balance overdrawn, transferred into treasury		\$812 03

Highways, Widening, Reconstruction, and Improvements.

Appropriation	\$22,000 00	
John A. Kenrick, treasurer, amount paid for labor, men and teams, as per pay rolls	\$18,196 71	
Committee on improvement of Newtonville square	822 29	
H. H. Miles, material and labor	408 84	
H. F. Wellington, material and labor	190 86	
W. L. Smith, material and labor	87 31	
R. J. Morrissey, material and labor	50 00	
C. H. and A. F. Ireland, material and labor	3 90	
Simpson Bros., concreting	402 92	
Noah Prescott, stone	112 50	
Daniel Warren, stone, etc.	93 18	
Timothy Stuart, stone, etc.	35 50	
F. E. Hamblin, drain pipe, etc.	294 21	
C. S. Packard, moving house	87 50	
George A. Goodyear, powder	63 75	
Waldo Bros., cement	26 02	
Boston & Albany railroad, freight	20 46	
M. Frank Lucas, stakes	24 75	
M. W. Sands, brick	15 75	
Albert Brackett, coal, etc.	15 10	
Maverick Oil Co., oil	8 26	
Alfred Fitzpatrick, lumber	8 04	
Cobb, Bates & Yerxa, oatmeal	8 00	
J. C. Farrar, blacksmithing	43 69	

Amounts carried forward, \$21,019 54 \$22,000 00

<i>Amounts brought forward,</i>	\$21,019 54	\$22,000 00
Thomas Belger, blacksmithing .	37 50	
John W. Scott, blacksmithing .	31 91	
Murray & Farrell, blacksmithing	23 15	
John Pulcifer, blacksmithing .	13 75	
B. F. Barlow, blacksmithing .	6 05	
Job Monahan, material and labor	53 90	
W. E. Porter, material and labor	6 00	
Barber Bros., supplies . .	12 80	
C. F. Eddy & Co., supplies .	2 40	
S. O. Thayer & Co., supplies .	2 00	
George Hamell, wood . .	6 50	
John Shorton, sods . . .	2 32	
Stephen F. Cate, use of team .	2 00	
Eames express, expressage .	50	
C. H. Jenison, expressage .	35	
J. Q. Harrington, filing saw .	25	
Total, as per item No. 19 of expenses . .		21,220 92
Balance unexpended transferred into treasury .		\$779 08

Interest on City Loans, Permanent.

Appropriation	\$19,241 00
Commonwealth of Massachusetts	\$10,610 00
National Bank of the Common- wealth	4,460 00
City Institution for savings, Lowell	2,400 00
Lynn Institution for savings .	721 00
Winchester Savings Bank .	412 00
Cape Ann Savings Bank . .	412 00
<i>Amounts carried forward,</i>	\$19,015 00
	\$19,241 00

<i>Amounts brought forward,</i>	\$19,015 00	\$19,241 00
Commissioners of the sinking funds of the City of Newton	206 00	
Total, as per item No. 20 of expenses		\$19,221 00
Balance unexpended transferred into treasury		\$20 00

Interest on City Loans, Temporary.

Appropriation		\$8,259 00
November 3d, Boston Five Cent Savings Bank, on \$75,000 3 per cent.	\$1,950 00	
November 4th, Brewster, Cobb & Estabrook, on \$25,000 2½ per cent.	555 03	
November 5th, Brewster, Cobb & Estabrook on \$25,000 2½ per cent.	419 13	
November 5th, Brewster, Cobb & Estabrook, on \$35,000 2¾ per cent.	347 57	
November 6th, F. H. Prince & Co., on \$45,000 2¾ per cent.	584 38	
November 6th, F. H. Prince & Co., on \$10,000, 3 per cent.	85 89	
November 8th, F. H. Prince & Co., on \$10,000, 3 per cent.	85 00	
November 8th, F. H. Prince & Co., on \$10,000, 3 per cent.	85 00	
November 9th, F. H. Prince & Co., on \$10,000, 3 per cent.	85 00	
<i>Amts carried forward,</i>	\$4,257 00	\$8,259 00

<i>Am'ts brought forw'd,</i>	\$4,257 00	\$8,259 00
November 9th, F. H. Prince & Co., on \$10,000, 3 per cent. .	85 00	
November 9th, F. S. Moseley on \$25,000, 3½ per cent. .	260 42	
November 20th, F. S. Moseley premium on loan . . .	50 00	
November, 20th, trustees of the Read Fund, on \$39,700 4½ per cent.	413 95	
Uninvested portion of Kenrick Fund, \$2,740 4 per cent. .	109 60	
Total, as per item No. 21 of expenses . . .		\$5,175 97

Balance unexpended, transferred into treasury \$3,083 03

Interest On Water Bonds.

Appropriation		\$54,380 00
January 1st, National Bank of the Commonwealth . . .	\$24,250 00	
April 1st, National Bank of the Commonwealth	2,940 00	
July 1st, National Bank of the Commonwealth	24,250 00	
October 1st, National Bank of the Commonwealth	2,940 00	
Total, as per item No. 22 of expenses . . .		\$54,380 00

Indigent Soldiers and Sailors.

Appropriation		\$1,000 00
Samuel G. Toothachre . . .	\$120 00	
<i>Am'ts carried forw'd</i>	\$120 00	\$1,000 00

<i>Amounts brought forward,</i>	\$120 00	\$1,000 00
Samuel Wallis	120 00	
Samuel Franklin	96 00	
James H. Lockley	92 00	
Daniel Sullivan	72 00	
John Sexton	72 00	
John F. Franklin	72 00	
Albert P. Bugbee	48 00	
Patrick Carrigan	48 00	
Jefferson Thomas	48 00	
John F. Nichols	48 00	
Franklin D. Hill	36 00	
John Curtin	25 00	
Total, as per item No. 23 of expenses		897 00
Balance unexpended transferred into treasury . .		\$103 00

Land Damages.

Appropriation	\$2,000 00
Heirs of G. J. Carleton, land on Murray street	\$1,000 00
Martha A. Porter, conveyance of right to enter upon premises to widen and improve Cheese cake brook	500 00
Alfred B. Darling, for land to round corners, Grove and Auburn streets	25 00
Total, as per item, No. 25 of expenses	1,525 00
Balance unexpended transferred into treasury . .	\$475 00

Memorial Day.

Appropriation	\$400 00
Charles Ward, Post No. 62 G. A.	
R.	\$400 00
Total, as per item No. 26 of expenses	\$400 00

Miscellaneous Expenses.

Appropriation	\$10,000 00
Additional appropriation per or- der of City Council	6,000 00
Additional appropriation per or- der of City Council, for trim- ming trees	300 00
	<hr/>
	\$16,300 00

Transferred to appro-
priation for convey-
ance of pupils by order
of City Council . \$265 00

Transferred to appro-
priation for fire de-
partment, by order of
City Council . . . 125 00

390 00

\$15,910 00

Water department, use of water,
watering streets \$1,714 29

Water department, use of water,
eight watering troughs 800 00

<i>Am'ts carried forw'd,</i>	\$2,514 29	\$15,910 00
------------------------------	------------	-------------

<i>Amounts brought forward,</i>	\$2,514 29	\$15,910 00
Water department, use of water, eight drinking posts	120 00	
Water department, use of water, fountain, Newtonville square	50 00	
Timothy Stuart, watering streets, Ward 1 and 7	958 75	
William H. Mague, watering streets, Ward 3 and 4	900 00	
T. R. Frost, watering streets, Ward 6	525 00	
Central Stables, watering streets, Ward 2	300 00	
Heirs of G. J. Carleton, land on Murray street	2,000 00	
W. S. Slocum, city solicitor, legal expenses	600 00	
New England Telegraph and Telephone Co., rental of in- struments and service	571 90	
Martin C. Laffie, serving war- rants, etc.	504 87	
Rodney M. Lucas, serving war- rants, etc.	136 74	
Newton Athenæum, aid for read- ing room	400 00	
Martha A. Porter, settlement of claim	500 00	
Martha Sanders, settlement of claim	150 00	
<i>Amounts carried forward,</i>	<hr/> \$10,231 55	<hr/> \$15,910 00

<i>Am'ts brought forward,</i>	15,910 00	\$10,231 55
Mrs. M. A. E. Parker, settlement of claim	125 00	
Robert Wilkinson, settlement of claim	50 00	
John A. Kenrick, Treas., labor, men and teams, highway department	307 75	
Wiggin & Wood, detective service	274 42	
E. D. Brooks, trimming trees, etc.	241 25	
Edwin Rogers, fire alarm signal boxes, etc.,	325 00	
J. B. Beers & Co., atlases, City of Newton,	325 00	
Newton Mills, abatement of taxes	215 60	
George E. Bridges, services collecting facts of births . . .	209 50	
Edwin Holman, insurance premiums, Public Library . . .	171 16	
J. N. Bacon, insurance premium, Public Library	17 50	
Kern & Fitch, abstract of deed for assessors	162 79	
M. D. Jones & Co., drinking fountain	150 00	
Henry F. Jenks, drinking fountain	142 50	
George E. Bridges, services registrar of voters	150 00	
Isaac F. Kingsbury, services registrar of voters	150 00	
<i>Amounts carried forward, .</i>	13,249 02	15,910 00

<i>Amount brought forward, .</i>	\$13,249 02	\$15,910 00
Richard T. Sullivan, services registrar of voters	150 00	
George H. Bourne, services registrar of voters	150 00	
George E. Bridges, extra services registration	100 00	
Joseph Lee, supplies	141 37	
Samuel W. Tucker, serving notices, etc.	104 59	
J. Frank Makee, carriages Memorial day	104 00	
John Irving, bouquets Memorial day	30 00	
J. M. Lowell, settlement of claim	100 00	
Charles Ward Post, No. 62 for Memorial day	100 00	
Clapp & Co., drinking fountain	65 00	
George H. Pratt, printing voting lists, reports, etc. . . .	631 89	
The Newton Graphic, printing etc.	114 51	
Fanning Printing Co., printing, etc.	59 70	
Rand, Avery Co., printing, etc .	48 45	
Rockwell & Churchill, printing, etc.	35 75	
Alfred Mudge & Son, printing, etc.	8 50	
Boston Safe Deposit & Trust Co., rent of box	40 00	
<i>Amounts carried forward,</i>	<u>\$15,232 78</u>	<u>\$15,910 00</u>

<i>Am'ts brought forward,</i>	\$15,232 78	\$15,910 00
Charles H. Stacy, telegrams, etc.	50 56	
Boston Belting Co., suction hose, etc.	93 63	
Hills, Bullens & Co., coal . . .	64 00	
Newton Cemetery, trees, Walnut St.	35 00	
Stephen F. Cate, use of teams .	228 50	
Central stables, use of teams .	84 75	
Nonantum stables, use of teams	84 50	
J. Frank Makee, use of teams .	14 00	
S. L. Pratt, use of teams . . .	9 50	
W. H. Mague, use of teams . .	4 50	
Fitzgerald Bros., use of teams .	3 00	
C. G. Tinkham, use of teams . .	2 00	
A. F. Harrington, use of teams .	2 00	
Samuel M. Jackson, use of horse and carriage in assessing taxes	80 00	
Little, Brown & Co., law books	19 50	
John C. Brimblecom, services in city clerk's office	353 00	
Moses Clark, jr., additional com- pensation for services in treasury department from July 1st to December 31st	150 00	
Benjamin F. Otis, sundry inci- dental expenses in auditor's department	133 04	
Isaac F. Kingsbury, sundry inci- dental expenses in city clerk's office	122 68	
<i>Am'ts carried forward,</i>	<hr/> \$16,766 94	<hr/> \$15,910 00

<i>Am'ts brought forward,</i>	\$16,766 94	\$15,910 00
John A. Kenrick, sundry incidental expenses in treasury department	47 82	
Nelly M. Heywood, services in auditor's department . .	80 00	
Nelly M. Heywood, services in treasury department . .	18 00	
C. M. Jordan, services in treasury department	18 00	
Isaac Hagar, expenses, in assessor's department . . .	14 14	
James Gray, services as appraiser	25 00	
James F. C. Hyde, services in Newton Mills matter . . .	25 00	
T. W. Nickelson, services in Newton Mills matter	12 41	
John Brundett, services in Newton Mills matter	5 00	
J. D. F. Brooks, binding tax lists	15 00	
Mass. Emergency & Hygiene Association, badges	21 10	
L. Cameron, services on telephone	10 00	
Williams, Wentworth & Vose, rent of hall, elections . . .	48 00	
C. W. Turner, rent of hall, election	20 00	
Stephen P. Sharples, testing water	15 00	
Adams Express Co., expressage	26 80	
Charles O. Davis, sundry cash expenses, etc.	20 00	
<i>Amounts carried forward,</i>	<hr/> \$17,188 21	<hr/> \$15,910 00

<i>Amounts brought forward, .</i>	\$17,188 21	\$15,910 00
Dr. F. E. Crockett, physical examination police officers	17 50	
J. D. Wellington, sundry cash expenses	12 38	
S. G. Curry, services Newton Mills case	10 00	
C. F. Richardson, expenses Newell case	7 94	
C. P. Heustis, expenses Newell case	3 84	
D. M. Hammond, expenses Newell case	2 65	
H. C. Wood, use of plants	7 00	
M. W. Sands, brick	6 30	
Michael Baron, services at bog fire	6 00	
George E. Worthen, services on telephone line	5 00	
E. Smead & Co., repairing flags	3 75	
Samuel Hobbs & Co., blank books	3 25	
John Ryan, services in court . .	3 00	
N. Y. & N. E. railroad, freight . .	3 55	
B. & A. railroad, freight	3 33	
Waldo Bros., cement	2 60	
Newton Post Office, rent of box	2 50	
John Pureill, conveying ballot boxes	4 00	
H. C. Daniels, conveying ballot boxes	3 00	
<i>Amounts carried forward,</i>	<hr/> \$17,295 80	<hr/> \$15,910 00

<i>Am'ts brought forw'd,</i>	\$17,295 80	\$15,910 00
S. B. Maxwell, conveying ballot boxes	2 00	
S. G. Williams, use of team .	3 00	
H. C. Dimond & Co., rubber stamps	2 00	
H. H. Hunt, material and labor	12 40	
F. E. Hamblin, material and labor	4 97	
John W. Scott, material and labor	4 81	
J. O. Evans' sons, material and labor	2 75	
L. H. Cranitch, material and labor	2 50	
Charles L. Bly, supplies, . . .	26 65	
H. O'Brien, supplies	8 50	
J. W. Fuller & Holtzer, supplies	7 22	
Edward E. Rice & Co., supplies	5 25	
John McCamman, supplies .	2 75	
H. A. Mansfield, supplies .	2 50	
A. R. Gay & Co., supplies .	2 00	
Martin C. Laffie, ringing bell .	8 00	
J. D. Wellington, ringing bell .	6 00	
Thomas Woodman, ringing bell .	6 00	
George W. Chamberlain, ringing bell	6 00	
J. T. Thomason, ringing bell .	6 00	
F. B. Sisson, ringing bell . .	6 00	
J. H. Boit, ringing bell . . .	6 00	
Fred Hamilton, ringing bell .	3 00	
Charles A. Worth, ringing bell .	3 00	
George L. Avery, ringing bell .	3 00	
J. C. Newcomb, ringing bell .	3 00	
<i>Am'ts carried forward,</i>	<hr/> \$17,441 10	<hr/> \$15,910 00

<i>Amounts brought forward,</i>	\$17,441 10	\$15,910 00
Stephen F. Cate, making returns of deaths	13 75	
W. H. Mague, making returns of deaths	9 75	
George W. Bush, making returns of deaths	9 00	
James McGourty, making returns of deaths	8 50	
John A. Peck, making returns of deaths	7 25	
John Flood, making returns of deaths	6 25	
Harrington & Gregg, making re- turns of deaths	6 25	
H. C. Lindley, extra duty during freshet	10 00	
G. K. Stacy, extra duty during freshet	10 00	
Walter Pingree, extra duty dur- ing freshet	8 00	
R. J. Riley, extra duty during freshet	8 00	
P. E. Ellis, extra duty during freshet	8 00	
Joseph Cummins, extra duty dur- ing freshet	8 00	
L. Woodside, extra duty during freshet	8 00	
Archibald Carley, extra duty dur- ing freshet	6 00	
<i>Amounts carried forward,</i>	<hr/> \$17,567 85	<hr/> \$15,910 00

<i>Amounts brought forward,</i>	\$17,567 85	\$15,910 00
C. W. H. Boulton, extra duty during freshet	6 00	
F. D. Graves, extra duty during freshet	6 00	
C. Thompson, extra duty during freshet	6 00	
C. A. Peck, extra duty during freshet	5 00	
R. J. Morrissey, extra duty during freshet	2 00	
John McCamman, extra duty during freshet	2 00	
Frank Liddell, extra duty during freshet	2 00	
H. W. Nicholl, extra duty during freshet	2 00	
C. M. Kebbe, extra duty during freshet	2 00	
A. I. English, extra duty during freshet	2 00	
C. Polly, extra duty during freshet	2 00	
C. B. Geary, extra duty during freshet	2 00	
D. McDonald, extra duty during freshet	2 00	
S. F. Chadbourne, extra duty during freshet	2 00	
H. H. Hunt, fitting up ward room	11 00	
<i>Am'ts carried forw'd,</i>	<hr/> \$17,621 85	<hr/> \$15,910 00

<i>Amounts brought forward,</i>	\$17,621 85	\$15,910 00
Thomas Woodman, fitting up ward room	10 00	
W. J. Henderson, fitting up ward room	9 48	
Higgins & Nickerson, fitting up ward room	6 00	
J. L. Randall, fitting up ward room	3 50	
R. O. Evans, services as warden Ward 1	10 00	
Edwin A. Smallwood, services as deputy warden, Ward 1	6 00	
Seth C. Stevens, services as clerk, Ward 1	10 00	
George R. Aston, services as dep- uty clerk, Ward 1	6 00	
Fred. H. Stone, services as in- spector, Ward 1	10 00	
Michael Hurley, services as in- spector, Ward 1	10 00	
A. P. Bugbee, services as deputy inspector, Ward 1	6 00	
Charles H. Stuart, services as dep- uty inspector, Ward 1	3 00	
Arthur S. Buckingham, services as deputy inspector, Ward 1	3 00	
Henry P. Dearborn, services as warden, Ward 2	10 00	
John F. Payne, services as dep- uty warden, Ward 2	6 00	
<i>Am'ts carried forward,</i>	<hr/> \$17,730 83	<hr/> \$15,910 00

<i>Amounts carried forward,</i>	\$17,730 83	\$15,910 00
Willard S. Higgins, services as clerk, Ward 2	10 00	
Alfred B. Tainter, services as deputy clerk, Ward 2 . . .	6 00	
Laurence H. Cranitch, services as inspector, Ward 2	10 00	
James D. Billings, services as inspector, Ward 2	10 00	
John H. Williams, services as deputy inspector, Ward 2 . . .	6 00	
William C. Gaudalet, services as deputy inspector, Ward 2 . . .	6 00	
Harvey C. Wood, services as warden, Ward 3	10 00	
Frank E. Hunter, services as deputy warden, Ward 3 . . .	6 00	
Edward S. Merchant, services as clerk, Ward 3	10 00	
Francis T. Cox, services as deputy clerk, Ward 3	3 00	
Arthur R. Coe, services as inspector, Ward 3	10 00	
Charles F. Tuttle, services as inspector, Ward 3	10 00	
Edward L. Lemon, services as deputy inspector, Ward 3 . . .	6 00	
Frank H. Humphrey, services as deputy inspector, Ward 3 . . .	6 00	
Frank C. Sheridan, services as deputy clerk, Ward 3 . . .	3 00	
<i>Amounts carried forward,</i>	<hr/> \$17,842 83	<hr/> \$15,910 00

<i>Amounts brought forward,</i>	\$17,842 83	\$15,910 00
George E. Johnson, services as warden, Ward 4	10 00	
Bernard Early, services as deputy warden, Ward 4	6 00	
Henry H. Mather, services as clerk, Ward 4	10 00	
G. Lyman Snow, services as deputy clerk, Ward 4 . . .	6 00	
Henry Washburn, services as inspector, Ward 4	10 00	
George W. Chamberlain, services as inspector, Ward 4 . . .	10 00	
William A. Leonard, services as deputy inspector, Ward 4 .	6 00	
Benjamin B. Clark, services as deputy inspector, Ward 4	6 00	
Albert J. Grover, services as warden, Ward 5	10 00	
John W. Howe, services as deputy warden, Ward 5	6 00	
Charles H. Hale, services as clerk, Ward 5	10 00	
George H. Osborne, services as deputy clerk, Ward 5 . . .	6 00	
William T. Logan, services as inspector, Ward 5	10 00	
Philip T. Begley, services as inspector, Ward 5	10 00	
John P. Tenney, services as deputy inspector, Ward 5 .	3 00	
<i>Amounts carried forward,</i>	<hr/> \$17,961 83	<hr/> \$15,910 00

<i>Amounts brought forward,</i>	\$17,961 83	\$15,910 00
Frederick A. O'Connor, services as deputy inspector, Ward 5	3 00	
James F. Russell, services as deputy inspector, Ward 5 .	6 00	
Samuel M. Jackson, services as warden, Ward 6	10 00	
William F. Woodman, services as deputy warden, Ward 6 .	6 00	
Stephen L. Bartlett, services as deputy clerk, Ward 6 . . .	5 00	
J. W. Hills, services as inspector, Ward 6	10 00	
H. H. Read, services as inspector Ward 6	10 00	
George F. Richardson, services as deputy inspector, Ward 6 .	6 00	
Braddock W. Crocker, services as deputy inspector and clerk Ward 6	8 00	
J. Edwin Warner, services as warden, Ward 7	10 00	
Charles W. Bassett, services as deputy warden, Ward 7 .	4 00	
Moses Clark, Jr., services as clerk, Ward 7	10 00	
Henry C. Daniels, services as deputy clerk, Ward 7 . . .	6 00	
George S. Woodbridge, services as inspector, Ward 7 . . .	10 00	
<i>Amounts carried forward, .</i>	<hr/> \$18,065 83	<hr/> \$15,910 00

<i>Amounts brought forward, .</i>	\$18,065 83	\$15,910 00
George W. Lamson, services as inspector, Ward 7 . . .	10 00	
Benjamin S. Wetherbee, services as deputy inspector, Ward 7 . . .	4 00	
Lewis H. Farlow, services as dep- uty inspector, Ward 7 . . .	6 00	
Sundry small bills	18 09	
	<hr/>	
Total as per item No. 27 of expenses		\$18,103 92
Balance overdrawn, transferred into treasury		\$2,193 92

Newton Free Library.

Appropriation		\$8,500 00
Hannah P. James, services, libra- rian	\$1,000 00	
Elizabeth P. Thurston, services as assistant librarian	600 00	
Louise J. Smallwood, services as assistant librarian	400 00	
Etta P. Cleveland, services as assistant librarian	400 00	
Millie E. Michaels, services as assistant librarian	200 01	
C. A. Flanders, services as assist- ant librarian	179 99	
Caroline Hills, services as assist- ant librarian	89 83	
F. L. Smallwood, services as assistant librarian	17 04	
	<hr/>	<hr/>
<i>Amounts carried forward, .</i>	\$2,886 87	\$8,500 00

<i>Am'ts brought forw'd,</i>	\$2,886 87	\$8,500 00
James J. Tower, services as janitor	800 00	
W. B. Clark & Carruth, books	1,324 37	
Estes & Lauriat, books . . .	110 00	
B. A. Fowler, books . . .	35 00	
D. Appleton & Co., books . . .	27 00	
Houghton, Mifflin & Co., books	16 50	
Adams, Putnam & Co., books	15 00	
Edwin A. Capen, books . . .	15 00	
A. L. Bancroft & Co., books . .	13 50	
The History Co., books . . .	9 00	
Mason & Fowler, books . . .	7 00	
James P. Magee, agt., books . .	6 68	
S. E. Casino, books . . .	6 00	
Dodd, Mead & Co., books . . .	6 00	
J. L. Utley, books . . .	6 00	
J. C. Stockbridge, books . . .	5 75	
Henry C. Nash, books . . .	5 40	
Cupples, Upham & Co., books	1 00	
H. D. Noyes & Co., subscriptions	189 68	
The Globe Printing Co., sub- scription	12 00	
Boston Daily Advertiser, sub- scription	12 00	
Nickelson & Co., subscription .	12 00	
Alta California Publishing Co., subscription	12 00	
The Evening Post, subscription	9 00	
George W. Armstrong, subscrip- tion	8 25	
<i>Am'nts carried forw'd,</i>	<hr/> \$5,551 00	<hr/> \$8,500 00

<i>Am'ts brought forward,</i>	\$5,551 00	\$8,500 00
The Tribune Co., subscription	8 00	
The Springfield Republican, subscription	7 00	
The World, subscription . . .	6 56	
Post Publishing Co., subscription	6 50	
New York Herald, subscription	6 00	
The Sun, subscription . . .	6 00	
Journal Newspaper Co., subscription	6 00	
R. M. Pulsifer & Co., subscription	6 00	
Globe Newspaper Co., subscription	6 00	
Gazette Printing Co., subscription	6 00	
Charles C. Fulton & Co., subscription	6 00	
Office of the Publishers Weekly, subscription	4 00	
H. G. Parker, subscription . . .	3 20	
The Newton Graphic, subscription	2 00	
J. H. H. McNamee, binding books	262 20	
Newton and Watertown Gas Light Co., gas	542 71	
Albert Brackett, coal	143 43	
New England Telegraph and Telephone, rental, etc. . . .	80 00	
Neil McGinnis, expressage of books	825 00	
Smith Ounderkirk, expressage of books	75 00	
W. C. Gaudalet, agency . . .	50 00	
<i>Amounts carried forward, .</i>	<hr/> \$7,608 60	<hr/> \$8,500 00

<i>Amts carried forwd,</i>	\$7,608 60	\$8,500 00
J. J. Peck, agency . . .	40 00	
B. Billings, agency . . .	40 00	
Alfred Brush, agency . . .	40 00	
E. E. Moody, agency . . .	24 75	
A. E. Brickett, agency . . .	24 00	
C. W. Kinder, agency . . .	20 00	
Howard Bros., ice . . .	15 00	
Rand, Avery, Co., catalogues, etc.	398 15	
B. K. Peirce, expenses attending convention	89 90	
George H. Pratt, subscription and slips	32 50	
Timothy Stuart, removing water from cellar	12 50	
Smith & Byram, cash boxes .	10 15	
Timothy Stuart, watering streets, (subscription)	5 00	
T. F. Glennan, material and labor	3 25	
Quincy Harrington, repairing lawn-mower	2 25	
O. F. Howe, baskets	2 00	
Library Bureau, supplies . .	72 84	
S. O. Thayer & Co., supplies .	31 33	
Weeks & Potter, supplies . .	14 40	
Blair & Hallett, supplies . .	7 85	
E. F. Smallwood, supplies . .	5 50	
<hr/>		
Total, as per item No. 28 of ex- penses		\$8,499 97
Balance unexpended, transferred into treasury		03

Addition to Public Library Building.

Special appropriation		\$23,000 00
Henry F. Ross, payments on ac- count of contract	\$13,500 00	
Allen & Kenway, services as arch- itects	400 00	
<hr/>		
Total, as per item No. 29 of ex- penses		13,900 00
<hr/>		
Balance of appropriation . . .		9,100 00

Parks and Squares.

Appropriation	\$2,000 00	
Additional appropriation per order of City Council	500 00	
<hr/>		
		\$2,500 00
M. C. Laffie, care of Farlow Park	\$560 00	
Water department, use of water Farlow Park	492 86	
Arthur Muldoon, material and labor at Newton Centre	326 75	
Newton cemetery, for trees, etc.	283 31	
Newton Centre Association, loam	131 40	
John A. Kenrick, treas., labor, etc., highway dep't	126 91	
Dennis H. Ryan, sods	87 90	
John Farrell, care of Washington Park	77 50	
William H. Condrin, labor men and teams	64 50	
<hr/>		
<i>Am'ts carried forw'd</i>	\$2,151 13	\$2,500 00

<i>Amounts brought forward, .</i>	\$2,151 13	\$2,500 00
Simpson Bros., concreting . . .	52 38	
James H. Bowditch, trees . . .	50 00	
Barber Bros., supplies . . .	50 00	
Charles H. Hale, carting loam	30 00	
Thomas Pickthall, material and labor	16 90	
V. Haffermehl, material and labor	15 42	
R. J. Morrissey, material and labor	14 75	
Oscar F. Lucas, supplies . . .	10 00	
T. F. Mague, care of West New- ton cemetery	6 25	
J. D. Sullivan, labor men and team	6 00	
Stephen F. Cate, use of team .	2 00	
George D. Dix, expended on Lin- coln Park	1 81	
	<hr/>	
Total as per item, No. 30 of expenses		\$2,406 64
		<hr/>
Balance unexpended trans- ferred into treasury		\$93 36

Police Department.

Appropriation	\$21,500 00	
Additional appropriation, per or- der of City Council . . .	94 00	
	<hr/>	
<i>Amount carried forward, .</i>		\$21,594 00

Amount brought forward,

\$21,594 00

Regular Police Officers.

Daniel M. Hammond, City Marshal	\$1,500 00
Charles F. Richardson, Sergeant of Police	1,095 00
N. F. Bosworth, patrolman	1,016 44
Charles E. Davis, patrolman	1,000 00
Charles P. Heustis, patrolman	1,000 00
John Purcill, patrolman	1,000 00
William C. Emerson, patrolman	997 26
John Ryan, patrolman	997 26
Charles O. Davis, patrolman	991 79
George E. F. Baker, patrolman	989 04
James D. Henthorn, patrolman	989 03
Frank B. Fletcher, patrolman	983 56
Robert S. Harrison patrolman	972 59
Rufus H. Moulton, patrolman	966 66
William G. Bosworth, patrolman	920 61
Ambrose M. Fuller, patrolman	841 13
John W. Conroy, Jr., patrolman	818 34
Edson C. Holmes, patrolman	678 57
Thomas C. Clay, patrolman	756 11
Charles T. Bartlett, patrolman	562 50
	<hr/>
	\$19,075 89

Special Police Officers.

John W. Quilty	724 15
Martin C. Laffie	104 17
Bernard F. Burke	57 54
A. F. A. G. Libby	5 48

Amounts carried forward

. \$891 34

\$21,594 00

<i>Amounts brought forward,</i>	\$19,967 23	\$21,594 00
Richard Conroy	5 48	
Peter R. Mullen	5 48	
Thomas O Shaughnessey . .	2 74	
	<hr/>	
	\$19,980 93	

Incidental Expenses.

John P. Lovell, Sons, pistols, etc.	243 08	
Stephen F. Cate, board of horse and use of teams	324 90	
Newton and Watertown Gas Light Co., gas	123 31	
Albert Brackett, coal	102 19	
Daniel M. Hammond, meals for prisoners, etc.	118 30	
Charles P. Heustis, meals for prisoners, etc.	27 24	
A. D. Colby, meals for prisoners, etc.	5 00	
New England Telephone and Telegraph Co., rental, etc. .	60 00	
Water Department, use of water	56 00	
Dr. J. H. Bodge, medical attend- ance on Officer Bartlett .	31 50	
C. F. Richardson, sundry cash expenses	18 57	
H. A. Winship, belts	30 00	
D. Evans & Co., buttons . . .	20 00	
S. L. Pratt, use of teams . . .	16 50	
William Weir, use of teams .	10 00	
	<hr/>	
<i>Amounts carried forward,</i>	\$21,167 52	\$21,594 00

<i>Amounts brought forward,</i>	\$21,167 52	\$21,594 00
H. A. Spear, use of teams . . .	9 75	
Daniels' Nonantum Stables, use of teams	9 00	
S. G. Williams, use of teams .	4 50	
A. F. Harrington, use of teams .	4 00	
Fitzgerald Bros., use of teams	3 50	
Central Stables, use of teams .	4 00	
H. S. Williams, use of teams .	2 45	
W. C. Lawrence, use of teams .	2 00	
W. H. McIntosh, use of teams .	1 50	
John Purcill, conveyance of prisoners	82 10	
C. O. Davis, conveyance of prison- ers	72 19	
N. F. Bosworth, conveyance [of prisoners	10 00	
R. S. Harrison, conveyance of prisoners	11 50	
A. M. Fuller, conveyance [of prisoners	8 50	
Dr. R. P. Loring, expenses on ac- count of lectures . . .	10 00	
James D. Henthorn, sundry cash expenses	18 77	
E. S. Colton, picture frames .	10 00	
J. W. Conroy & Son, lettering boxes	10 00	
O. B. Leavitt, ash barrels . .	6 00	
C. Seaver, Jr., photographs .	5 00	
Charles H. Stacy, postage stamps	4 00	
<i>Amounts carried forward,</i>	<hr/> \$21,456 28	<hr/> \$21,594 00

<i>Am'ts brought forward,</i>	\$21,456 28	\$21,594 00
C. H. Jenison, expressage . . .	4 90	
Mrs. Mahan, cleaning and washing	3 50	
S. B. Maxwell, cleaning and washing	2 75	
P. A. McVicar, material and labor	36 25	
J. R. Nason, material and labor	19 75	
H. H. Hunt, material and labor	16 92	
Clark Man'f Co., material and labor	3 95	
J. W. Conroy, Jr., material and labor	6 00	
D. H. McWain, material and labor	2 07	
Samuel Ward & Co., supplies .	21 65	
C. A. Taylor, supplies . . .	6 00	
H. E. Fleming, supplies . . .	2 30	
Sundry small bills,	9 14	
	<hr/>	
Total as per item No. 31 of expenses		\$21,591 46
		<hr/>
Balance unexpended transferred into treasury		\$2 54

Poor out of Almshouse.

Appropriation		\$8,000 00
Nathan Mosman, services as city almoner and clerk of Board of Overseers	\$700 00	
Dexter Whipple, services, overseer, Ward 1	37 50	
	<hr/>	<hr/>
<i>Amounts carried forward,</i>	\$737 50	\$8,000 00

<i>Amounts brought forward, :</i>	\$737 50	\$8,000 00
Edwin O. Childs, services, overseer, Ward 1	12 50	
E. S. Colton, services, overseer, Ward 2	50 00	
G. H. Ingraham, services, overseer, Ward 3	50 00	
Nathan Mosman, services, overseer, Ward 4	50 00	
H. C. Hoyt, services, overseer, Ward 5	50 00	
George Warren, services, overseer, Ward 6	50 00	
John Warner, services, overseer Ward 7	50 00	
Nathan Mosman, amount paid to sundry persons	131 48	
Worcester Lunatic Hospital, care of sundry persons . . .	1,253 79	
Northampton Lunatic Hospital, care of sundry persons .	199 77	
Asylum for the Chronic Insane, care of sundry persons .	396 43	
Commonwealth of Massachusetts, care of sundry persons .	67 58	
City of Boston, partial support of poor	153 50	
City of Lawrence, partial support of poor	48 00	
City of Malden, partial support of poor	38 00	
<i>Amounts carried forward,</i>	<hr/> \$3,338 55	<hr/> \$8,000 00

<i>Amounts brought forward,</i>	\$3,338 55	\$8,000 00
City of Waltham, partial support of poor	33 00	
City of Cambridge, partial support of poor	7 13	
Town of Needham, partial support of poor	77 54	
Town of Watertown, partial support of poor	50 73	
Town of Webster, partial support of poor	26 11	
Town of Sudbury, partial support of poor	20 38	
Town of Quincy, partial support of poor	9 50	
Town of Roylston, partial support of poor	1 79	
Dr. James Utley, medical attendance	57 00	
Dr. F. E. Crockett, medical attendance	51 00	
Dr. John Homans, medical attendance	50 00	
Dr. Charles F. Haynes, medical attendance	17 00	
Dr. H. B. Stoddard, medical attendance	16 00	
Dr. S. A. Sylvester, medical attendance	15 25	
Dr. F. L. Thayer, medical attendance	15 00	
<i>Amounts carried forward,</i>	<hr/> \$3,785 98	<hr/> \$8,000 00

<i>Am'ts brought forward,</i>	\$3,785 98	\$8,000 00
Dr. J. F. Frisbie, medical attend- ance	11 00	
Dr. Eben Thompson, medical attendance	11 00	
Dr. J. Blodgett, medical attend- ance	5 00	
Dr. Albert Nott, medical attend- ance	5 00	
Dr. J. H. Hazelton, medical attendance	4 00	
Dr. D. E. Baker, medical attend- ance	1 50	
Aug. Williams, prescriptions .	33 13	
H. Eugene Fleming, prescriptions	8 00	
C. F. Rogers, prescriptions . . .	5 00	
Wm. C. Gaudelet, prescriptions	3 55	
George H. Ingraham, prescrip- tions	3 30	
Eliot W. Keyes, prescriptions .	2 55	
Frank W. Freeman, prescriptions	1 25	
James McGourty, funeral ex- penses	20 00	
Stephen F. Cate, funeral expenses	10 00	
F. F. Raymond, portion funeral expenses, H. Young . . .	10 00	
Newton Cemetery Corporation, interments	37 00	
Newton Cottage Hospital, care of sundry persons	91 00	
Massachusetts General Hospital, care of Miss Sutherland .	51 00	
<i>Amounts carried forward</i>	<hr/> \$4,099 26	<hr/> \$8,000 00

<i>Amounts brought forward,</i>	\$4,099 26	\$8,000 00
Miss Alice Williston, board of Sullivan children	73 05	
Roxbury Home, etc., board of Miss Crawley	72 00	
Mrs. J. G. Latta, board of Rich- ardson children	24 00	
J. R. Farnum, rent of house, Mrs. Pitts	120 00	
W. O. Hunt, rent of house for Mrs. Denning	96 00	
B. Farrell, rent of house for Mrs. Kennedy	96 00	
J. B. Murphy, rent of house for Mrs. Boyce	44 00	
Mrs. William Collins, rent of house for Mrs. Jeffers . . .	44 00	
B. F. Houghton, rent of house for Mrs. Cazmay	36 00	
Michael Ryan, rent of house for Mrs. Costello	35 75	
Thomas Mullen, rent of house for Mrs. McGue	30 00	
O. F. Lucas, rent of house for Mr. Brown	8 75	
Timothy Sullivan, rent of house for Patrick Allen	5 00	
H. E. Woodberry, groceries .	290 15	
W. O. Knapp & Co., groceries .	194 31	
C. Strout & Sons, groceries .	184 30	
A. A. Savage, groceries . . .	148 00	
J. B. Murphy, groceries . . .	134 25	
<i>Am'ts carried forw'd,</i>	<hr/> \$5,734 88	<hr/> \$8,000 00

<i>Am'ts brought forw'd,</i>	\$5,734 88	\$8,000 00
H. A. Sherman, groceries . . .	127 87	
Ford's Boston Branch, groceries .	116 00	
E. Vicars, groceries	102 00	
H. W. Fanning & Son, groceries	94 15	
W. P. Holden, groceries . . .	93 80	
Fred L. Cook, groceries . . .	85 12	
Alonzo Whitney, groceries . .	60 75	
Howard B. Coffin, groceries . .	47 34	
I. R. Stevens, groceries . . .	33 78	
G. P. Atkins, groceries . . .	28 00	
B. F. Houghton, groceries . .	26 00	
George H. Adams, groceries . .	17 00	
J. W. Davis & Co., groceries . .	16 00	
B. B. Vassall, greceries . . .	11 00	
William Lowe, groceries . . .	6 00	
Albert Brackett, fuel	290 52	
C. F. Eddy & Co., fuel	208 07	
Almshouse Department, fuel . .	169 25	
J. W. Hill, fuel	121 04	
Hills, Bullens & Co., fuel . . .	77 30	
James Nickelson, fuel	60 13	
J. W. Mitchell, fuel	23 25	
Daniel Warren, fuel	12 50	
J. Edward Hills, fuel	6 50	
George Wright, fuel	3 50	
Fitzgerald Brothers, use of teams	8 00	
S. L. Pratt, use of teams	3 00	
Stephen F. Cate, use of teams . .	2 50	
W. H. Mague, use of teams . . .	2 00	
L. A. Hall, milk	11 03	
<i>Am'ts carried forw'd</i>	<hr/> \$7,598 28	<hr/> \$8,000 00

<i>Amounts brought forward,</i>	\$7,598 28	\$8,000 00
H. C. Hoyt, sundry cash expenses	5 00	
A. J. Gordon, shoes . . .	5 50	
George W. Gill & Co., shoes .	5 50	
John V. Sullivan, shoes . . .	4 65	
W. G. Fellows, shoes . . .	4 08	
Lewis Rich, shoes . . .	2 50	
Everett E. Moody, supplies .	24 20	
A. J. Fiske & Co., supplies .	5 50	
A. Lamson, supplies . . .	2 00	
Sundry small bills . . .	4 75	

Total, as per item No. 32 of expenses . . .		\$7,661 96
---	--	------------

Balance unexpended, transferred into treasury .		\$338 04
---	--	----------

Poor out of Almshouse, Commonwealth of Massachusetts.

Paid Commonwealth of Massachusetts, for partial support of sundry persons as per item No. 33 of expenses . . .		\$5 72
--	--	--------

Public Property.

Appropriation	\$11,000 00	
Additional appropriation per order, City Council . . .	3,000 00	
		\$14,000 00
<i>Amount carried forward,</i>		\$14,000 00

<i>Amount brought forward,</i>		\$14,000 00
F. S. Rollins, land for enlargement, High school building	\$3,000 00	
L. A. Ross, for enlargement Hose House building, Upper Falls	1,655 67	
T. F. Mague, for grading, etc., Williams school house .	464 96	
Walker and Pratt, Man'f. Co., new furnaces, etc. . . .	339 00	
Highland Foundry Co., new furnace	230 00	
L. A. Gammons, new furnace, etc.	137 00	
Newtonville Universalist Society, for loam	152 00	
First Baptist Society, use of chapel, for school in Thompsonville	150 00	
Simpson Brothers, concreting .	117 44	
J. L. Randall, care of Prospect school house hall	110 00	
John A. Kendrick, treas., labor, men and teams, highway department	95 50	
John Beal, loam	92 40	
Cabot Brothers and Prescott, furniture	80 00	
Moses Pond & Co., iron pipe .	53 00	
Morss & Whyte, wire guards .	40 00	
J. Eliot Bond, carpet, etc. . .	38 68	
N. Boynton & Co., flag . . .	32 50	
<i>Am'ts carried forward,</i>	<hr/> \$6,788 15	<hr/> \$14,000 00

<i>Am'ts brought forw'd,</i>	\$6,788 15	\$14,000 00
N. and W. Gas Light Co., gas .	31 28	
Keeler & Co., chairs . . .	22 00	
F. Jones, use of stable . . .	18 00	
George H. Pratt, advertising, etc.	17 63	
Boston Daily Advertiser, adver-		
tising	12 00	
Newton Graphic, advertising .	10 13	
Stephen F. Cate, use of teams .	14 00	
Daniels Nonantum stables, use of		
teams	14 00	
A. F. Harrington, use of teams	2 00	
Fred W. Cole, repairs on clock	15 00	
Moses G. Crane, repairs on clock	10 25	
Henry H. Hunt, material and		
labor	779 09	
Higgins & Nickerson, material		
and labor	553 42	
Charles A. Hill, material and		
labor	534 23	
V. Haffermehl, material and labor	420 50	
Arthur Muldoon, material and		
labor	365 25	
James Dunn, material and		
labor	323 63	
George S. Noden, material and		
labor	311 00	
M. C. Higgins, material and labor	229 90	
O. B. Leavitt, material and labor	216 02	
Edward Browser, material and		
labor	211 50	
<i>Am'ts carried forward,</i>	<hr/> \$10,898 98	<hr/> \$14,000 00

<i>Amounts brought forward,</i>	\$10,898 98	\$14,000 00
Charles H. Hale, material and labor	211 12	
William E. Porter, material and labor	177 92	
J. and A. Kohler & Co., material and labor	148 47	
S. D. Hicks & Son, material and labor	130 00	
H. F. Ross, material and labor .	116 75	
F. H. Humphrey, Agt., material and labor	102 19	
W. P. Leavitt & Son, material and labor	101 47	
T. J. Hartnett, material and labor	98 66	
A. W. Snow, material and labor	91 05	
J. A. Nevins, material and labor	87 81	
R. J. Morrissey, material and labor	85 43	
Isaac Smith, material and labor	80 75	
W. F. Soule, material and labor	79 90	
Milo Lucas, material and labor	79 83	
Michael Hines, material and labor	77 23	
Samuel D. Geary, material and labor	70 62	
Christopher Needham, material and labor	70 00	
H. H. Miles, material and labor	62 77	
L. H. Cranitch, material and labor	62 70	
Sidney G. Stevens, material and labor	62 00	
J. D. Billings, material and labor	50 00	
<i>Amounts carried forward, .</i>	<hr/> \$12,945 65	<hr/> \$14,000 00

<i>Amounts brought forward, .</i>	\$12,945 65	\$14,000 00
Edward Pike, material and labor	44 58	
Water department, material and labor	35 08	
John Farquhar's sons, material and labor	32 85	
F. E. Hamblin, material and labor	32 82	
W. J. Wilson, material and labor	29 00	
Joseph Zeller, material and labor	26 50	
James Dorney, material and labor	26 12	
Russell & Burke, material and labor	29 34	
Walworth Man'g Co., material and labor	25 12	
Russell Freeman, material and labor	24 30	
Thomas Pickthall, material and labor	23 75	
Allen & Barry, material & labor	23 50	
A. H. Adams, material and labor	23 45	
J. O. Evan's sons, material and labor	22 90	
C. G. Fletcher, material and labor	16 25	
Job F. Bailey, material and labor	18 20	
John P. Warren, material and labor	16 88	
Otis McFadden, material and labor	14 60	
C. Keiser, material and labor .	14 90	
J. C. Newcomb, material and labor	14 00	
J. H. Williams, material and labor	13 25	
<i>Amounts carried forward,</i>	<hr/> \$13,452 14	<hr/> \$14,000 00

<i>Amounts brought forward,</i>	\$13,452 14	\$14,000 00
W. B. Alexander, material and labor	12 90	
O. F. Lucas, material and labor	12 12	
W. A. Fogwell, material and labor	10 00	
D. H. McWain, material and labor	8 00	
L. W. Clapp, material and labor	7 98	
D. O. Driscoll, material and labor	7 85	
Cranitch & Horrigan, material and labor	5 40	
C. S. Phillips, material and labor	5 10	
John F. Farrell, material and labor	4 87	
W. J. Henderson, material and labor	4 80	
H. F. Wellington, material and labor	4 40	
W. H. French & Co., material and labor	3 30	
W. L. Smith, material and labor	2 73	
Peter C. Baker, material and labor	2 35	
Edward Burke, material and labor	2 00	
D. J. Cooney, material and labor	2 00	
Redding, Baird & Co., supplies .	76 76	
J. E. Trowbridge, supplies . . .	51 65	
S. O. Thayer & Co., supplies . .	49 77	
John & James Dobson, supplies .	13 00	
C. F. Hovey & Co., supplies . .	12 92	
W. L. Stiles, jr., supplies . . .	12 26	
H. M. Darling & Co., supplies	10 24	
<i>Am'ts carried forw'd,</i>	<hr/> \$13,777 54	<hr/> \$14,000 00

<i>Amounts brought forward,</i>	\$13,777 54	\$14,000 00
H. W. Wellington, supplies .	9 93	
George M. Dewing, supplies .	4 63	
Barber Bros., supplies . .	3 15	
Daniel Stearns, sods . .	20 00	
American Tube Works, brass tubes	12 75	
Boston Belting Co., hose .	8 97	
Fife's express, expressage .	6 50	
W. G. Roby & Co., copper .	3 87	
John H. Pray, Sons & Co., carpet lining	3 50	
Gilkey & Stone, lumber . .	3 48	
Luther Bent & Co., mattress .	2 25	
Murray & Farrell, blacksmithing	5 25	
Charles A. Cole, blacksmithing	5 00	
J. C. Farrar, blacksmithing .	3 55	
John W. Scott, blacksmithing .	3 25	
Cornelius McBride, labor, men and teams	39 37	
Timothy Stuart, labor, men and teams ,	15 75	
John Foster, labor	22 75	
Timothy O'Leary, labor . .	19 25	
Patrick Horrigan, labor . .	17 50	
David Broderick, labor . .	12 25	
William Sullivan, labor . .	10 50	
John Holloran, labor . .	10 50	
Michael Devine, labor . .	10 50	
John Coffee, labor . .	10 50	
Michael Ryan, labor . .	8 75	
<i>Amounts carried forward, .</i>	<hr/> \$14,051 24	<hr/> \$14,000 00

<i>Amounts brought forward,</i>	\$14,051 24	\$14,000 00
John Chamberlain, labor . . .	7 00	
Thomas Greene, labor . . .	7 00	
James Pillion, labor . . .	7 00	
Cornelius Dorsey, labor . . .	6 00	
James Darney, labor . . .	5 00	
John McCammon, labor . . .	2 63	
Sundry small bills . . .	11 44	
<hr/>		
Total, as per item No. 34 of expenses . . .		\$14,097 31
<hr/>		
Balance overdrawn transferred into treasury . . .		\$97 31

Removal of Ashes.

Appropriation		\$3,500 00
John A. Kenrick, treasurer, labor, men and teams, highway department	\$2,960 34	
A Danforth, agt., three new sleds and blacksmithing . . .	182 42	
E. W. Hodgson, material and labor	35 75	
P. Carbry, material and labor . . .	12 00	
George Mathews & Co., canvas . . .	7 00	
W. H. Bustin, horse collar . . .	6 50	
Thomas Johnson, labor . . .	2 63	
J. Pulcifer, blacksmithing . . .	4 50	
Andrew Peters, blacksmithing . . .	44	
John W. Scott, blacksmithing . . .	25	
<hr/>		
Total, as per item No. 35 of expenses . . .		\$3,211 83
<hr/>		
Balance unexpended transferred into treasury . . .		\$288 17

Read Fund Income.

Paid to sundry parties, in accordance with the will of the late Charles A. Read, income received from the trustees, upon investments, as per item No. 36 of expenses \$1,452 74

Salaries.

Appropriation		\$14,400 00
J. Wesley Kimball, Mayor	\$1,000 00	
Isaac F. Kingsbury, city clerk	2,000 00	
John A. Kenrick, city treasurer and collector of taxes	2,700 00	
Benjamin F. Otis, city auditor	2,000 00	
Winfield S. Slocum, city solicitor	1,000 00	
Isaac Hagar, chairman Board of Assessors	1,200 00	
Samuel M. Jackson, assessor	750 00	
Howard B. Coffin, assessor	750 00	
J. D. Wellington, city messenger	1,100 00	
J. D. Wellington, sealer of weights and measures	75 00	
Moses Clark, Jr., deputy collector	1,200 00	
Albert S. Glover, clerk of Common Council	200 00	
Dexter Whipple, assistant assessor, Ward 1	60 00	
A. A. Savage, assistant assessor, Ward 2	104 00	
<i>Amount carried forward, .</i>	<i>\$14,139 00</i>	<i>\$14,400 00</i>

<i>Am'ts brought forward,</i>	\$14,139 00	\$14,400 00
George E. Allen, assistant assessor, Ward 3	72 00	
Rufus Moulton, assistant assessor, Ward 4	96 00	
W. E. Clarke, assistant assessor Ward 5	114 00	
George Warren, assistant assessor, Ward 6	108 00	
E. W. Cobb, assistant assessor, Ward 7	164 00	
Total, as per item No. 37 of expenses		\$14,693 00
Balance overdrawn transferred into treasury .		\$293 00

SCHOOLS.

General Appropriation, Educational Department.

General appropriation for schools .	\$101,300 00	
Received from dog tax, for 1885, by order of City Council	2,081 23	
		\$103,381 23
Transferred to appropriation for school incidentals \$6,000 00		
Transferred to appropriation for conveyance of pupils	90 00	
		\$6,090 00
<i>Am't carried forward</i>		\$97,291 23

Amount brought forward,

\$97,291 23

EXPENDITURES IN DETAIL.

Thomas Emerson, superintendent	\$2,750 00
Thomas Emerson, secretary	
School Board	300 00
	<hr/>
	\$3,050 00

High School.

Edward H. Cutler, head master	\$2,800 00
Ezra W. Sampson, master . .	2,190 00
S. Warren Davis, assistant master	1,600 00
Caroline Spear, assistant . .	1,000 00
S. Alice Worcester, assistant .	1,000 00
M. Abby Smith, assistant . .	1,000 00
Maybel P. Davis, assistant . .	1,000 00
Evelyn Rich, assistant . . .	1,000 00
S. Alice Ranlett, assistant . .	968 75
Lida P. Underhill, assistant .	968 75

Special Teachers.

Adeline V. Pond, drawing and writing	500 00
Emma F. Bowler, drawing and writing	300 00
Jennie E. Ireson, calisthenics and elocution	500 00
Horace M. Walton, instructor in music	1,500 00
J. P. B. Fiske, military drill .	250 00
Frank H. Brown, military drill .	130 00
Ellen L. Bond, sewing . . .	450 00
Julia Grant, sewing . . .	450 00
Sarah L. Dix, sewing . . .	39 37
	<hr/>

Amounts carried forward

\$20,696 87 \$97,291 23

Amounts brought forward, \$20,696 87 \$97,291 23

Mason School.

Albert L. Harwood, master	.	\$1,900 00
Ellen L. Baker, head assistant	.	750 00
Maria F. Wood, assistant	.	600 00
Roberta J. Hardie, assistant	.	537 50
Mary E. Mason, assistant	.	537 50
Georgia P. Buckman, assistant	.	487 50
Mary Tenney, assistant	.	345 00
Abby D. Esty, assistant	.	312 50
		<hr/>
		\$26,166 87

Rice School.

Myra A. Wilson, principal	.	750 00
Margaret Martin, assistant	.	600 00
Ellen M. Cook, assistant	.	600 00
Ida A. Merrill, assistant	.	180 00
Addie L. Thompson, assistant	.	187 50
		<hr/>
		\$28,484 37

Oak Hill School.

Louise N. Burbank, principal	.	\$750 00
		<hr/>
		\$29,234 37

Thompsonville School.

Helen A. Davis	.	1,837 50
		<hr/>
		\$29,984 37

Hyde School.

George A. Moore, master	.	\$1,837 50
Charlotte E. Cameron, head assistant	.	750 00
		<hr/>

Am'ts carried forw'd, \$32,571 87 \$97,291 23

<i>Amounts brought forward, .</i>	\$32,571 87	\$97,291 23
Gertrude Blackmar, assistant .	600 00	
Phebe E. Churchill, assistant .	600 00	
N. Grace Gould, assistant . .	550 00	
Blanche G. Wetherbee, assistant	518 75	

Prospect School.

Charles E. Hussey, master .	\$1,637 50	
Martha L. Perkins, head assistant	750 00	
Ella F. Crocker, assistant . .	600 00	
Lucy A. Hayward, assistant .	600 00	
Lizzie W. Everett, assistant .	600 00	
Mary P. Fanning, assistant .	600 00	
	<hr/>	
	\$39,628 12	

Hamilton School.

Luther E. Leland, master . .	\$1,900 00	
Anna G. Swain, head assistant .	750 00	
Ellen M. Leland, assistant . .	600 00	
Sarah H. Jumper, assistant .	255 00	
Hilma M. Ekman, assistant .	206 25	
Anna A. Jackson, assistant .	90 00	

Williams School.

George L. Chandler, master .	\$665 00	
John O. Godfrey, master . .	975 00	
Elizabeth A. Pinnock, head assis-		
tant	750 00	
Hattie A. Ingraham, assistant .	600 00	
Ann B. Smith, assistant . .	600 00	
Dora A. Allen, assistant . .	600 00	
Belle M. Hall, assistant . .	478 75	
	<hr/>	

<i>Am'ts carried forw'd</i>	\$48,098 12	\$97,291 23
-----------------------------	-------------	-------------

<i>Am'ts brought forw'd,</i>	\$48,098 12	\$97,291 23
Laura Saltonstall, assistant .	375 00	
Harriette S. Bachelder, assistant	356 25	
Carrie Y. Wentworth, assistant	187 50	
	<hr/>	
	\$49,016 87	

Pierce School.

Levi F. Warren, master . .	\$1,900 00	
Sarah A. Warren, head assistant	750 00	
M. Alice Warren, assistant .	600 00	
Eliza E. Simmons, assistant .	600 00	
Fanny M. Leavitt, assistant .	112 50	
Annie E. Merritt, assistant .	40 63	
	<hr/>	
	\$53,020 00	

Davis School.

Ella G. Bates, principal . .	\$750 00	
Helen S. Tolman, assistant .	600 00	
Sarah E. Foster, assistant . .	600 00	
Addie A. Jackson, assistant .	332 50	
Gertrude A. Elder, assistant .	75 00	
Lucinda W. Smith, assistant .	50 00	
Mary E. Wall, assistant . .	37 50	
	<hr/>	
	\$55,465 00	

Franklin School.

Elizabeth F. Paddock, principal	\$750 00	
Lulu M. Bagley, assistant . .	600 00	
Margaret A. Mague, assistant .	600 00	
Clara H. Thompson, assistant .	578 75	
	<hr/>	

<i>Amounts carried forward,</i>	\$57,933 75	\$97,291 23
---------------------------------	-------------	-------------

Am'ts brought forward, \$57,933 75 \$97,291 23

Barnard School.

Calista S. Wood, principal . .	\$750 00
Susan E. Copeland, assistant .	600 00
Lizzie F. Jones, assistant . .	600 00
	<hr/>
	\$59,883 75

Adams School.

William A. Spinney, master .	\$1,900 00
V. E. Hapgood, head assistant .	750 00
Estella M. Haynes, assistant .	600 00
Abby J. Fiske, assistant . .	600 00
Angelia A. Smith, assistant .	600 00
Clara M. Fox, assistant . .	500 00
	<hr/>
	\$64,833 75

Claffin School.

Herbert F. Sylvester, master .	\$1,637 50
Carrie H. Rugg, head assistant .	750 00
Lydia A. Brierly, assistant . .	600 00
Ellen M. Harrigan, assistant .	568 75
Ellen S. Tewksbury, assistant .	568 75
Mary Noble, assistant . .	50 00
	<hr/>
	\$69,008 75

Eliot School.

George G. Edwards, master .	\$1,837 50
H. Augusta Millard, head assis-	
tant	750 00
Louise W. Clelland, assistant .	600 00
Ellen B. Prime, assistant . .	450 00
	<hr/>

Amounts carried forward \$72,646 25 \$97,291 23

Am'ts brought forw'd, \$72,646 25 \$97,291 23

Jackson School.

Eliza J. Lovely, principal . . .	\$750 00
Mary A. Wellington, assistant . .	600 00
Gertrude G. Tewksbury, assistant .	600 00
Lottie E. Stearns, assistant . . .	600 00
Rose A. Harkins, assistant . . .	518 75
Jennette Cobb, assistant . . .	46 85
	<hr/>
	\$75,761 85

Bigelow School.

H. Chapin Sawin, master . . .	\$1,900 00
Martha M. Bakeman, head assis- tant	750 00
Annie E. George, assistant . . .	600 00
S. Louise Shelton, assistant . . .	600 00
Augusta A. Lentell, assistant . .	600 00
Emily J. Dyer, assistant . . .	600 00
Elizabeth Ayles, assistant . . .	600 00
Mary R. Putney, assistant . . .	518 75
Jennie P. Morehouse, assistant . .	15 00
	<hr/>
	\$81,945 60

Underwood School.

Charlotte E. Sewell, principal . .	\$750 00
Ada L. Donkin, assistant . . .	600 00
Annie L. Wood, assistant . . .	600 00
Josephine W. Littlefield, assis- tant	600 00
	<hr/>

Am'ts carried forward, \$84,495 60 \$97,291 23

Amounts brought forward, \$84,495 60 \$97,291 23

Lincoln School.

Nellie B. Rand, principal . . .	600 00
	<hr/>
	\$85,095 60

Janitors.

John Cummings, High . . .	\$650 04
Thomas Woodman, Mason . . .	540 00
Albert C. Marston, Rice . . .	240 00
John Mohr, Thompsonville . . .	96 00
Herman Esty, Oak Hill . . .	96 00
Enoch Houston, Hyde . . .	300 00
Joshua L. Randall, Prospect . . .	360 00
James H. Boit, Hamilton . . .	240 00
Martin Walsh, Williams . . .	480 00
Thomas Johnson, Pierce and Davis	480 00
Bridget Cox, Franklin . . .	240 00
John Woody, Barnard . . .	240 00
Mary Delaney, Adams . . .	264 00
John Dorney, Claflin . . .	360 00
James Dunn, Eliot	360 00
Mary Walsh, Jackson . . .	264 00
John McCammon, Bigelow Under- wood and Lincoln . . .	480 00
Honora Sweeney, Lincoln . . .	16 00

<i>Amounts carried forward,</i>	<hr/>	<hr/>	\$91,001 64	\$97,291 23
---------------------------------	-------	-------	-------------	-------------

<i>Amounts brought forward,</i>	\$91,001 64	\$97,291 23
Fuel.		
Albert Brackett, coal . . .	\$3,142 63	
C. F. Eddy & Co., coal . . .	2,011 66	
Almshouse department, wood . .	349 50	
George Warren & Co., coal . . .	12 00	
	<hr/>	
Total, as per item No. 38 of expenses . .		\$96,517 43
Balance unexpended transferred into treasury . .		\$773 80
Enlargement of High-School Building.		
Special appropriation		\$45,000 00
Henry F. Ross, payments on ac- count of contract	\$32,300 00	
Allen & Kenway, services as architects	600 00	
	<hr/>	
Total, as per item No. 39 of expenses		32,900 00
		<hr/>
Balance of appropriation		12,100 00
School Incidentals.		
Appropriation	\$9,500 00	
Transferred from general appro- priation for schools by order of City Council	6,000 00	
	<hr/>	
		\$15,500 00
Adams and Ingraham, books, sta- tionery, etc.	\$2,063 79	
Knight, Adams & Co., books, sta- tionery, etc.	1,428 61	
William Ware & Co., books	764 87	
Ginn & Co., books	657 41	
	<hr/>	
<i>Amounts carried forward,</i>	\$4,914 68	\$15,500 00

<i>Amounts brought forward, .</i>	\$4,914 68	\$15,500 00
Lee & Shepard, books. . . .	446 88	
D. Appleton & Co., books . . .	431 49	
A. C. Stockin, books	309 89	
Houghton, Mifflin & Co., books .	245 66	
Charles Scribner's sons, books .	195 00	
Harrison Hume, books	125 87	
Dodd, Mead & Co., books . . .	122 95	
Carl Schoenhof, books	113 42	
B. A. Fowler, books	105 00	
Harper Bros , books	88 06	
Clark & Maynard, books	80 10	
Charles H. Whiting, books . . .	67 43	
E. B. Fairchild, books. . . .	60 25	
Carroll W. Clarke, books	53 14	
S. R. Winchell & Co., books . . .	51 00	
Willard Small, books	38 60	
Leech, Sherwill & Sanborn, books	28 13	
Porter & Coates, books	27 22	
Boston Supply Co., books	21 85	
M. T. Rogers, books	15 20	
Van Antwerp, Bragg & Co., books	8 00	
D. C. Heath & Co., books	6 82	
Henry C. Nash, books	6 00	
J. D. F. Brooks, binding books	331 86	
Water Department, use of water	927 00	
George G. Edwards, expenses of suit	300 00	
Martin C. Laffie, services as tru- ant officer, etc.	335 84	
<i>Am'ts carried forw'd,</i>	<hr/> \$9,457 34	<hr/> \$15,500 00

<i>Amounts brought forward,</i>	\$9,457 34	\$15,000 00
Lawrence Industrial School, support of truants	271 04	
George H. Pratt, printing reports, etc.	427 87	
Alfred Mudge & Son, printing .	16 50	
Husted & Harding, printing rules and regulations	5 85	
F. D. Graves, printing . . .	3 00	
Newton Graphic, printing . . .	2 80	
Hallet, Davis & Co., piano and cartage	319 50	
George H. Brown, tuning pianos	29 00	
A. G. Whitcomb, school furniture	208 04	
The Educational Supply Co., apparatus, etc.	191 11	
J. A. Swasey, blackboards, etc.	163 95	
The Prang Educational Company, drawing models . . .	138 10	
Thomas Emerson, sundry incidental expenses	130 41	
The Newton Odorless Excavating Co., cleaning vaults	105 00	
J. H. Daniels, diplomas . . .	96 45	
J. Thomas Baldwin, band, exhibition drill	75 00	
George E. Bridges, taking census of children from 5 to 15 .	75 00	
Ezra W. Sampson, incidental expenses (laboratory) . . .	59 35	
<i>Amounts carried forward,</i>	<u>\$11,775 31</u>	<u>\$15,500 00</u>

<i>Amounts brought forward,</i>	\$11,775 31	\$15,500 00
George A. Walton, incidental expenses	32 00	
Newton and Watertown Gas Light Co., gas	43 88	
J. B. Turner, postage stamps, etc.	23 04	
Edwin Rogers, storm signal	20 00	
Robert S. Shedd, labor on guns, etc.	16 65	
S. A. White, cleaning and laying carpet	13 28	
The Cyclostyle Co. of N. E., cyclostyle	13 25	
Kiessling & Heerde, repairing furniture	9 50	
Magee Furnace Co., oil stove, etc.	7 75	
M. F. Rogers & Co., wall maps	7 50	
Drew, Allis & Co., directories and maps	3 90	
Daniels Nonantum stables, use of teams	\$170 00	
William Weir, use of teams.	23 00	
Stephen F. Cate, use of teams	16 00	
Doherty Bros., use of teams	3 75	
John T. Hill, use of teams	2 50	
F. H. Hunting, expressage	34 52	
C. H. Jenison, expressage	7 05	
T. L. Whiton, expressage	5 55	
Neal McGinnis, expressage	3 65	
Adams & Co., expressage	3 35	
Howland & Churchill, repairing clocks, etc.	64 05	
<i>Amounts carried forward,</i>	<hr/> \$12,299 48	<hr/> \$15,500 00

<i>Amounts brought forward,</i>	\$12,299 48	\$15,500 00
A. Judson Macomber, repairing clocks, etc.	38 50	
W. H. Wales, repairing clocks, etc.	8 00	
A. Phipps repairing clocks . . .	6 50	
G. W. Ulmer, repairing clocks . .	4 00	
George G. Chambers, repairing clocks	2 50	
Fred B. Spear, conveyance of pupils to Armory Hall	40 00	
Ellen L. Bond, sundry incidental		
Julia Grant, sundry incidental expenses	26 62	
expenses	59 86	
Sarah L. Dix, sundry incidental expenses	3 97	
A. Amelia Smead, amount paid for sewing material	4 50	
C. F. Richardson, expense on ac- count of truant	5 50	
Boston Terra Cotta Co., moulding clay	4 00	
Ralph Davenport, repairing chairs	2 25	
Benjamin Addison, labor	7 50	
Arthur Farrell, labor	4 00	
James H. Boit, labor	2 00	
G. N. D. Fernald, bells at High School	2 50	
Higgins & Nickerson, material and labor	554 23	
Milo Lucas, material and labor . .	327 41	
O. B. Leavitt, material and labor	237 68	
<i>Am'ts carried forward,</i>	<hr/> \$13,641 00	<hr/> \$15,500 00

<i>Amounts brought forward,</i>	\$13,641 00	\$15,500 00
H. F. Wellington, material and labor	224 97	
James Dunn, material and labor	94 14	
J. F. Horrigan, material and labor	71 70	
W. E. Porter, material and labor	55 88	
W. L. Smith, material and labor	54 97	
Charles A. Hill, material and labor	50 00	
W. E. Scribner, material and labor	44 44	
James Dorney, material and labor	39 93	
Cranitch & Horrigan, material and labor	35 13	
W. F. Soule, material and labor	34 83	
Sidney G. Steeves, material and labor	34 49	
L. H. Cranitch, material and labor	29 31	
Estate of C. S. Philips, material and labor	28 38	
L. A. Gammons, material and labor	24 14	
Russell Freeman, material and labor	17 17	
J. O. Evans' Sons, material and labor	15 40	
J. C. Farrar, material and labor	15 15	
Bent & Bush, material and labor	15 00	
H. H. Miles, material and labor	13 91	
Thompson & Odell, material and labor	12 75	
<i>Amounts carried forward,</i>	<hr/> \$14,552 69	<hr/> \$15,500 00

<i>Amounts brought forward,</i>	\$14,552 69	\$15,500 00
T. J. Hartnett, material and labor	7 55	
S. O. Thayer & Co., material and labor	4 87	
Isaac Smith, material and labor	4 25	
W. B. Alexander, material and labor	3 65	
Daniel F. Healy, material and labor	3 00	
J. L. Sears, material and labor .	2 00	
Clafin, Larabee & Co., supplies	21 40	
E. S. Ritchie & Co., supplies .	17 77	
C. A. Browning & Co., supplies	17 50	
James W. Vinal & Co., supplies	17 28	
H. A. Sherman, supplies . .	14 17	
George Frost & Co., supplies .	10 15	
George S. Perry, supplies . .	9 38	
George W. Gill, supplies . .	8 85	
George H. Adams, supplies .	4 65	
William Reed & Son, supplies .	4 27	
J. T. Trowbridge, supplies .	3 50	
Fred. L. Cook, supplies . .	2 89	
Peabody & Whitney, supplies .	338 52	
Harris, Rogers & Co., supplies .	124 00	
Thomas Hall, supplies . .	104 85	
O. F. Lucas, supplies	31 61	
Holland & Daniels, supplies .	68 08	
R. H. Stearns, supplies . .	25 00	
W. C. Gaudelet, supplies . .	21 71	
Z. Fleming, supplies	2 75	
Greenwood & Co., supplies .	2 58	
<i>Amounts carried forward, .</i>	<hr/> \$12,945 65	<hr/> \$14,000 00

<i>Amounts brought forward,</i> .	\$15,428 92	\$15,500 00
Silver, Rogers & Co , supplies .	2 55	
Barber Bros., supplies . . .	2 11	
Sundry small bills, supplies .	19 31	
	<hr/>	
Total, as per item No. 45 of expenses . . .		\$15,452 89
		<hr/>
Balance unexpended transferred into treasury .		\$47 11

Sidewalks and Street Crossings.

Appropriation		\$10,000 00
John A. Kenrick, treasurer, labor, men and teams, highway department	\$4,243 80	
Simpson Bros., concreting . . .	5,070 85	
Noah Prescott, curb-stone, etc. .	344 61	
C. H. & A. F. Ireland, sidewalk on Hammond street	162 50	
Boston & Albany railroad, freight	75 72	
L. A. Ross, plank sidewalk . . .	51 10	
John W. Scott, blacksmithing . .	14 17	
Thomas Belger, blacksmithing . .	11 80	
Murray & Farrell, blacksmithing	7 50	
B. F. Barlow, blacksmithing . . .	7 35	
J. C. Farrar, blacksmithing . . .	7 20	
P. A. McVicar, blacksmithing . .	1 00	
Sundry small bills	2 40	
	<hr/>	
Total, as per item No. 41 of expenses . . .		\$10,000 00

Sinking Fund—City Debt.

Appropriation		\$21,500 00
Amount paid Commissioners of Sinking Fund, as per item No. 42 of expenses		21,500 00

Sinking Fund—School Loan.

Appropriation	\$4,500 00
Amount paid Commissioners of Sinking Fund, as per item No. 43 of expenses	4,500 00

Sinking Fund—Water Bonds.

Appropriation	\$18,000 00
Amount paid Commissioners of Sinking Fund, as per item No. 44 of expenses	18,000 00

Sinking Fund—Public Park Loan.

Amount paid the Commissioners of the Sinking Funds of the City of Newton, in accordance with section 5, chapter 44 of the Acts of 1882, being a portion of the amount received from sundry persons on account of betterments assessed for laying out and locating Farlow Park, as per item No. 45 of expenses	\$852 90
--	----------

State Aid.

Appropriation	\$1,000 00
Joshua V. Ramsdell	\$72 00
William Watson	69 00
S. C. Spaulding	68 00
Anna C. Boyd	48 00
Thomas Dennon	48 00
Sarah Fell	48 00

Am'ts carried forw'd

\$353 00	\$1,000 00
----------	------------

<i>Amounts brought forward,</i>	\$353 00	\$1,000 00
Margaret Hagarty . . .	48 00	
Eliza M. Jackson . . .	48 00	
Catherine McAleer . . .	48 00	
Agnes Myers	48 00	
Mary A. Mann	48 00	
Elizabeth A. McCrillis . .	48 00	
Thomas Probert	48 00	
Jane C. Poor	48 00	
Malachi Watson	48 00	
Bridget A. Wright	48 00	
Thomas Dolan	42 00	
Mary Duran	36 00	
Albert C. Dearborn	36 00	
Ellen Russell	32 00	
George Hutchinson	28 00	
Elizabeth Burke	19 95	
Mary A. Derby	8 00	
Total, as per item No. 46 of expenses . . .		\$1,034 95
Balance overdrawn transferred into treasury .		34 95

Street Light Department.

Appropriation	\$21,750 00
Newton & Watertown Gas Light Co., gas, and care of 873 street lamps	\$15,162 90
Newton & Watertown Gas Light Co., oil, and care of 493 street lamps	5,006 73
<i>Amounts carried forward,</i>	\$20,169 63
	\$21,750 00

<i>Am'ts brought forw'd,</i>	\$20,169 63	\$21,750 00
Newton & Watertown Gas Light Co., glass, repairs, setting and painting posts . . .	237 32	
Davis & Farnum Manf' Co., iron posts and frames . . .	196 00	
Wheeler Reflector Co., copper lanterns	180 50	
Nathaniel Tufts, copper lanterns, etc.	165 62	
Thomas Hart, setting posts, etc.	39 75	
F. E. Bowker, setting posts, etc.	23 00	
C. A. Gowell, setting posts, etc.	13 60	
Arthur Muldoon, setting posts, etc.	12 00	
James Scully, setting posts, etc.	8 50	
W. J. Towne, material, care of lamps, etc.	10 50	
J. E. Trowbridge, repairing lan- terns, etc.	14 40	
A. W. Snow, repairing lanterns, etc.	6 85	
A. J. Fiske & Co., repairing lanterns, etc.	1 90	
George H. Pratt, advertising .	7 50	
The Newton Graphic, advertising	7 50	
Stephen F. Cate, use of team .	6 00	
S. L. Pratt, use of team . . .	6 00	
C. H. Jenison, expressage .	2 15	
Eames Express, expressage .	25	
<hr/>		
Total, as per item No. 47 of expenses . . .		\$21,113 97
Balance unexpended transferred into treasury .		636 03

Suspense Account.

Paid to sundry parties from amount in city treasury subject to call, as per item No. 48 of expenses	\$1 75
---	--------

Taxes 1886—County.

Amount assessed for county tax	\$14,934 33
Amount paid to county treasurer as per item No. 49 of expenses	14,934 33

Taxes 1886—Corporation.

Amount paid to Commonwealth of Massachusetts, as per item No. 50 of expenses	\$26 15
--	---------

Taxes 1886—National Bank.

Amounts paid to Commonwealth of Massachusetts for non-residents of Newton, National Bank shares, as per item No. 51 of expenses	\$922 51
---	----------

Taxes 1886—State.

Amount assessed for State tax	\$24,840 00
Amount paid to State treasurer, as per item No. 52 of expenses	\$24,840 00

Temporary Loans—1886.

November 3, paid Boston Five Cent Savings Bank . . .	\$75,000 00
November 4, paid Suffolk Savings Institution	25,000 00
November 5, paid Suffolk Savings Institution	25,000 00
November 5, paid Hamilton Na- tional Bank	35,000 00
November 6, paid Commonwealth of Massachusetts	10,000 00
November 6, paid National Bank of Redemption	45,000 00
November 8, paid Commonwealth of Massachusetts	20,000 00
November 9, paid Commonwealth of Massachusetts	45,000 00
December 1, paid Trustees of the Read Fund	39,700 00
Total, as per item No. 53 of expenses	<hr/> \$319,700 00

Use of Hydrants.

Appropriation	\$8,940 00
Amount paid water department as per item No. 54 of ex- penses	\$8,940 00

Underwood School-house Improvement, (Special Appropriation).

Appropriation		\$4,100 00
William E. Porter, material and labor, (carpenter) . . .	\$1,021 18	
John Marden, material and labor, (mason)	735 00	
Charles A. Hill, material and labor, (painting)	597 74	
T. J. Hartnett, material and labor, (plumbing)	587 13	
Moses Pond & Co., heating apparatus	785 00	
Allen & Kenway, services as architects	192 90	
Joseph W. Grigg, slate urinal	69 55	
M. W. Sands, brick	42 00	
John Joyce, labor, men and teams	21 00	
Timothy Stuart, labor, men and teams	14 00	
William Welch, labor, men and teams	14 00	
C. McBride, labor, men and teams	7 00	
Thomas Goode, labor	3 50	
Fulton Iron Foundry Co., hydrant covers, etc.,	10 00	
Total, as per item No. 55 of expenses		\$4,100 00

Water Maintenance.

Appropriation		\$13,000 00
Albert S. Glover, services as registrar	\$1,800 00	
<i>Amounts carried forward, .</i>	<i>\$1,800 00</i>	<i>\$13,000 00</i>

<i>Amounts brought forward,</i>	\$1,800 00	\$13,000 00
Albert S. Glover, incidental cash expenses	69 41	
Albert S. Glover, error on account of weekly payments .	11 38	
H. N. Hyde, jr., services as superintendent	1,500 00	
H. N. Hyde, jr., incidental cash expenses	36 70	
H. N. Hyde, jr., error on account of weekly payments . .	9 45	
J. C. Whitney, services as inspector	522 03	
J. C. Whitney, incidental cash expenses	19 43	
J. C. Whitney, error on account of weekly payments . .	7 69	
Thomas Coughlan, services as engineer	1,200 00	
Thomas Coughlan, error on account of weekly payments .	7 51	
Miss E. M. Baylies for clerical services	135 65	
M. E. Noyes, clerical services .	64 00	
E. A. Wood, clerical services .	60 00	
W. S. French, clerical services .	37 43	
Pay rolls of laborers	3,309 00	
J. Edward Hills, coal	2,489 11	
Albert Brackett, coal	30 00	
Daniel Sullivan, wood	60 00	
T. Albert Ward, care of reservoir (1885)	50 00	
<i>Amounts carried forward,</i>	<u>\$11,418 79</u>	\$13,000 00

<i>Amounts brought forward,</i>	\$11,418 79	\$13,000 00
T. Albert Ward, care of reservoir, (1886)	50 00	
John Dolan, carting coal, . . .	112 10	
Hartford Steam Boiler Insurance Co., policy	45 00	
Timothy Stuart, carting pipe .	136 25	
Keeler & Co., office furniture .	63 75	
Estate of E. S. Farnsworth, desks	15 00	
Dr. E. S. Wood, analysis of water	10 00	
Newton & Watertown Gas Light Company, gas	11 60	
N. W. Tupper, hay and grain .	72 09	
E. Smead & Co., hay and grain .	66 25	
Parker, Holmes & Co., rubber boots	32 96	
Stephen F. Cate, use of teams .	110 25	
A. F. Harrington, use of teams .	33 21	
Nonantum stables, use of teams .	4 00	
F. Jones express, expressage .	8 70	
C. H. Jenison, expressage .	3 62	
Frank R. Patch, expressage .	3 55	
Henry H. Hunt, material and labor	95 03	
The Pettie Machine Works, ma- terial and labor	47 70	
Higgins & Nickerson, material and labor	31 13	
Walworth Man'f Co., material and labor	22 70	
Isaac Smith, material and labor	18 13	
<i>Am'ts carried forward,</i>	\$12,411 81	\$13,000 00

<i>Am'ts brought forward,</i>	\$12,411 81	\$13,000 00
W. P. Leavitt & Son, material and labor	13 97	
E. W. Hodgson, material and labor	12 21	
Cranitch & Horrigan, material and labor	6 80	
J. H. Cushman, material and labor	3 85	
Leonard & Ellis, oil	106 75	
F. E. Hamblin, drain-pipe, etc. .	40 54	
George H. Pratt, printing, etc. .	37 75	
Fanning Printing Co., printing etc.	12 60	
Alfred Mudge & Son, paper .	10 50	
American Fire Hose Man'f Co., repairing hose t.	18 45	
Magee Furnace Co., stove . . .	22 00	
Madison Bunker, care of sick horses	5 92	
American Spiced Food Co., food	4 08	
Drew, Allis & Co, directories .	3 00	
Fred B. Spear, use of teams .	3 00	
Henry F. Jenks, material and labor	12 50	
O. B. Leavitt, material and labor	5 00	
P. Y. Hoseason, material and labor	2 00	
B. F. Barlow, blacksmithing .	34 51	
Charles A. Cole, blacksmithing .	6 50	
J. C. Farrar, blacksmithing .	3 97	
A. Danforth, agt., blacksmithing	2 80	
J. Q. Harrington, sharpening mower	2 00	
<i>Amounts carried forward</i>	<u>\$12,782 51</u>	<u>\$13,000 00</u>

<i>Amounts brought forward,</i>	\$12,782 51	\$13,000 00
Sherburne & Co., supplies . . .	34 95	
Parker & Wood, supplies . . .	34 01	
M. R. Warren, supplies . . .	27 07	
Hooper, Lewis & Co., supplies . .	19 13	
J. C. Clark Printing Co., supplies	16 48	
A. A. Savage, supplies . . .	6 22	
B. B. Billings, supplies . . .	3 97	
Chapman Valve Man'f Co., supplies	3 83	
Page & Coffin, supplies . . .	3 13	
C. W. Morehouse, supplies . . .	3 06	
J. A. & W. Bird & Co., supplies	3 00	
C. F. Eddy & Co., supplies . . .	2 80	
H. H. Darling & Co., supplies . .	2 50	
Sundry small bills	9 85	
Total, as per item No. 56 of expenses . . .		\$12,952 51
Balance unexpended transferred into treasury .		\$47 49

Water Meters and Service Pipe.

Appropriation		\$6,000 00
Pay-rolls of laborers	\$1,968 30	
National Meter Co., meters, etc.	1,886 60	
Union Water Meter Co., repairs of meters	123 45	
J. C. Whitney, services as inspector	390 18	
Chadwick Lead Works, lead pipe etc.	507 87	
National Tube Works, pipe, etc.	434 32	
<i>Amounts carried forward,</i>	\$5,310 72	\$6,000 00

<i>Am'ts brought forw'd,</i>	\$5,310 72	\$6,000 00
Ward & Curley, supplies . . .	161 65	
E. Smead & Co., grain, etc. . .	94 18	
N. W. Tupper, grain, etc. . .	41 76	
Davis & Farnum Manf' Co., cast- ings	40 01	
Chapman Valve Manf' Co., sup- plies	38 88	
Cunningham Iron Works Co., supplies	33 52	
A. F. Harrington, use of teams	78 99	
Stephen F. Cate, use of teams .	3 00	
B. F. Barlow, blacksmithing .	49 17	
A. Danforth, agt., blacksmithing	7 53	
S. D. Keegan, blacksmithing .	6 43	
Thomas Belger, blacksmithing .	3 90	
Murray & Farrell, blacksmithing	2 08	
J. C. Farrar, blacksmithing .	1 39	
Jenkins Bros., packing, etc. .	23 38	
H. N. Hyde, jr., sundry cash ex- penses	19 98	
Albert S. Glover, sundry cash ex- penses	3 74	
Boston & Albany railroad, freight	13 90	
E. W. Hodgson, material and labor	13 40	
F. H. Hunting, expressage .	8 95	
H. R. Worthington, repairing meters	8 16	
M. C. Laffie, delivering notices .	8 00	
Rodney M. Lucas, delivering notices	4 00	
<i>Am'ts carried forw'd,</i>	<hr/> \$5,976 72	<hr/> \$6,000 00

<i>Amounts brought forward,</i>	\$5,976 72	\$6,000 00
Robert Harrison, delivering notices	3 50	
P. Y. Hoseason, material and labor	4 00	
Timothy Stuart, labor, men and teams	3 50	
Madison Bunker, care of sick horse	2 83	
Hooper, Lewis & Co., supplies	2 50	
Walworth Mfg. Co., supplies .	1 38	
Sundry small bills	4 43	
<hr/>		
Total, as per item No. 57 of expenses .		\$5,998 86
<hr/>		
Balance, unexpended, transferred into treasury		\$1 14

Water Rebate.

Appropriation	\$500 00
Paid to sundry parties, rebate of water bills, as per item No. 58 of expenses	351 07
<hr/>	
Balance, unexpended, transferred into treasury	\$148 93

Water Construction.

Total expenditure to December 31, 1885	\$999,315 72
Pay-roll of laborers	\$16,862 72
Warren Foundry and Machine Co., iron pipe	3,846 95
National Meter Co., meters and repairs	6,460 50
<hr/>	
<i>Amounts carried forward,</i>	\$27,170 17
	\$999,315 72

<i>Amounts brought forward,</i>	\$27,170 17	\$999,315 72
Chadwick Lead Works, lead	2,341 97	
Charles Carr, hydrants, etc.	2,046 67	
Davis and Farnum Mfg. Co., cast- ings, etc.	1,600 20	
Manhattan Artesian Well Co., contract for driving wells,	1,485 75	
Ward and Curley, supplies.	1,420 52	
Chapman Valve Mfg. Co., water gates, etc.	1,088 90	
City Iron Foundry, gate boxes, etc.	870 94	
Timothy Stuart, carting pipe, etc.	654 17	
Boston and Albany Railroad, freight	610 53	
National Tube Works Co., pipe	527 87	
John A. Gill, contract for driving wells	459 10	
Cunningham Iron Works Co., pipe, etc.,	383 04	
Walworth Mfg. Co., supplies	335 87	
A. F. Harrington, use of teams	309 30	
J. C. Whitney, services as inspec- tor	230 59	
W. S. French, services on account additional supply of water	283 94	
Henry D. Woods, services on account additional supply of water	104 43	
J. C. Farrar, blacksmithing	270 98	
A. Danforth, agt., blacksmithing	124 94	
<i>Amounts carried forward,</i>	<hr/> \$42,379 88	<hr/> \$999,315 72

<i>Amounts brought forward,</i>	\$42,379 88	\$999,315 72
B. F. Barlow, blacksmithing .	96 20	
Thomas Belger, blacksmithing	37 72	
S. D. Keegan, blacksmithing .	29 28	
Charles A. Cole, blacksmithing	21 39	
P. A. McVicar, blacksmithing .	12 36	
Murray & Farrell, blacksmithing	5 44	
D. J. O'Donnell, blacksmithing	2 10	
George A. Goodyear, powder and fuse	265 84	
G. Fuller & Son, lumber . .	179 06	
M. W. Sands, brick	173 25	
The Pettee Machine Works, material and labor . . .	131 65	
The American Fire Hose Mfg. Co., hose, etc.	122 50	
E. Smead & Co., hay and grain	118 04	
N. W. Tupper, hay and grain	62 65	
Whittier Machine Co., supplies .	116 00	
Dodge, Haley & Co., supplies .	95 81	
Akron Rubber Works, hose, etc.	94 91	
Parker & Wood, pick handles .	87 02	
Waldo Bros., cement	76 80	
The United States, testing pipe	74 25	
Sewall & Day Cordage Co., pack- ing, etc.	61 83	
W. H. Leatherbee & Son, lumber	53 42	
Central stables, use of teams .	45 00	
Stephen F. Cate, use of teams .	16 00	
Nonantum stables, use of teams .	5 50	
<i>Amounts carried forward</i>	<hr/> \$44,363 90	<hr/> \$999,315 72

<i>Amounts brought forward,</i>	\$44,363 90	\$999,315 72
Parker, Holmes & Co., rubber boots	44 07	
Albert F. Noyes, Sundry cash expenses	43 51	
Edward W. Cate, sundry cash expenses	21 00	
F. H. Hunting, expressage	42 45	
Frank R. Patch, expressage	11 80	
R. J. McAdoo, expressage	2 65	
George F. Blake Man'f Co., supplies	41 23	
C. Horton & Co., services	35 00	
Fairbanks, Brown & Co., scales	35 00	
H. M. Darling & Co., lantern globes	34 08	
M. Frank Lucas, stakes	34 00	
Higgins & Nickerson, material and labor	32 30	
E. W. Hodgson, material and labor	20 09	
H. H. Hunt, material and labor	14 42	
W. H. French & Co., material and labor	12 37	
O. B. Leavitt, material and labor	3 15	
Morss & Whyte, supplies	28 43	
Bradlee & Hastings, supplies	27 52	
Thomas McKinley, inspecting pipe	25 00	
Arthur Muldoon, material and labor	24 75	

Am'ts carried forw'd,

\$44,896 72 \$999,315 72

<i>Amounts brought forward,</i>	\$44,896 72	\$999,315 72
Hall Rubber Co., rubber boots	22 13	
Speare, Gregory & Co., oil	15 58	
Cobb, Bates & Yerxa, oatmeal	15 14	
N. Y. & N. E. Railroad, freight	14 13	
John Marden, material and labor	15 20	
A. A. Savage, supplies	14 76	
C. W. Morehouse, supplies	11 27	
Jenkins Bros., packing	14 70	
At J. Wilkinson & Co., supplies	7 43	
Bigelow & Dowse, lawn-mower	11 00	
Newton & Watertown Gas Light Co., coke	10 00	
C. F. Eddy & Co., cement	7 75	
Brown & Sharp Mfg. Co., water test guages	7 80	
A. S. Morss, spikes	6 75	
Arthur L. Woodruff, services as inspector	6 00	
P. Y. Hoseason, material and labor	6 00	
Sumner & Goodwin, supplies	4 68	
Fulton Iron Foundry Co., supplies	4 50	
M. Bunker, care of sick horse	4 25	
Arthur A. Glines, photograph	4 00	
The Armstrong Mfg. Co., wrench	3 50	
American Spiced Food Co., spiced food	1 75	
Total, as per item No. 59 of expenses	\$45,105 04	
<i>Am'ts carried forw'd,</i>	\$45,105 04	\$999,315 72

Amounts brought forward, \$45,105 04 \$999,315 72

Received.

Received from sundry persons as follows:

For pipe sold	.	.	\$677 75
For labor	.	.	212 10
For lead reels	.	.	12 24
For meter rents	.		9 61

Total, as per item No. 51 of receipts \$911 70

\$44,193 34

Total expenditure to Dec. 31, 1886 . \$1,043,509 06

SCHEDULE OF CITY PROPERTY, REAL AND PERSONAL.

Almshouse Department.

70 acres of land	.	.	.	.	\$7,000 00
Buildings	.	.	.	.	8,000 00
Personal property	.	.	.		3,947 35
					<u>\$18,947 35</u>

Armory Hall.

Land, building, fixtures, etc	\$12,000 00
-------------------------------	---	---	---	---	-------------

City Hall Department.

City Hall furniture and fixtures	.				\$50,000 00
City seal	.	.	.	.	25 00
City stamps	.	.	.	.	35 00
Reports, statutes, and special laws					300 00
Set of standard weights and measures	.	.	.	.	100 00
Record books	.	.	.	.	200 00
Bookeases, maps, etc.	.	.	.		500 00
					<u>\$51,160 00</u>

Amount carried forward,

\$82,107 35

Amounts brought forward,

\$82,107 35

Cemetery Department.

Land in Newton cemetery . .	\$2,000 00	
Tomb in Newton Cemetery . .	800 00	
	<hr/>	\$2,800 00

City Engineering Department.

Two transits, \$150 each . .	300 00	
Three transits, \$100 each . .	300 00	
Two levels, \$100 each . .	200 00	
Draughting materials . . .	126 00	
Surveying materials . . .	48 00	
Tools	50 00	
Horse, wagon, etc.	150 00	
	<hr/>	\$1,174 00

Fire Department.

Steam fire engine No. 1, apparatus, horses and furniture .	\$6,000 00	
Steam fire engine No. 2, apparatus, horses and furniture .	6,000 00	
Steam fire engine No. 3, apparatus, horses and furniture .	6,000 00	
Chemical Engine No. 1 . . .	2,250 00	
Hook and ladder, truck, horses, etc.	3,300 00	
Hose No. 4, horse, hose, reel, etc., Newtonville	1,200 00	
Hose No. 5, horse, hose, reel, etc., Auburndale	1,200 00	
Hose No. 6, horse, hose, reel, etc., Lower Falls	1,500 00	

Amounts carried forward

\$27,450 00

\$86,081 35

<i>Am'ts brought forw'd,</i>	\$27,450 00	\$86,081 35
Hose No. 7, hose-carriage, horse, hose, etc., Upper Falls	1,500 00	
Fire-alarm telegraph, including team, etc.	24,000 00	
	<hr/>	\$52,950 00

Fire and Highway Department Buildings.

Steam fire-engine house, stables and land, Ward 7	\$13,000 00	
Steam fire engine house, stables and land, Ward 3	19,000 00	
Steam fire-engine house, stables and land, Ward 6	19,000 00	
Hook and ladder and hose No. 4 house, stables and land	17,500 00	
Hose station No. 5, stables and land, Auburndale	5,200 00	
Hose station No. 6, stables and land, Lower Falls	6,900 00	
Hose station No. 7, stables and land, Upper Falls	7,000 00	
	<hr/>	\$87,600 00

Free Library Department.

Newton Free Library, building and land	\$56,000 00	
Books	10,000 00	
	<hr/>	\$66,000 00

Gravel and Gravel Lands.

Land on Jewett Street, Ward 1	\$2,000 00	
Land on California Street, Ward 1	6,600 00	
Land on Crafts Street, Ward 2	500 00	
	<hr/>	
<i>Amounts carried forward,</i>	\$9,100 00	\$292,631 35

<i>Amounts brought forward,</i>	\$9,100 00	\$292,631 35
Land on Chapel Street, Ward 2	100 00	
Land on Watertown Street, Ward 2	1,000 00	
Land on Faxon Street, Ward 2 .	200 00	
Land on Auburndale Avenue, Ward 3	1,200 00	
Land on Pine Street, Ward 3 .	2,000 00	
Land on Pine Street, Ward 3 .	2,000 00	
Land on Pine Street, Ward 3 .	1,200 00	
Land on Pine Street, Ward 3 .	250 00	
Land on Pine Street, Ward 3 .	550 00	
Land on Bourne Street, Ward 4	9,000 00	
Gravel on Washington Street, Ward 4	600 00	
Gravel on Washington Street Ward 4	600 00	
Gravel on Walnut Street . . .	500 00	
Land on Elliot Street, Ward 5 .	1,000 00	
Gravel on Parker Street, Ward 5	250 00	
Gravel on Pine Street . . .	100 00	
Land east of Oak Street, Ward 5	1,200 00	
Land on Willow and Centre Streets, Ward 6	500 00	
Land on Florence Street, Ward 5	400 00	
Land on Florence Street, Ward 5	1,500 00	
Land on Homer Street, Ward 6	4,000 00	
Land on Murray street, Ward 2	4,000 00	
	<hr/>	\$41,250 00

Highway Department.

1 steam road roller	\$6,000 00	
22 cart horses, \$225	4,950 00	
	<hr/>	
<i>Amounts carried forward</i>	\$10,950 00	\$333,881 35

<i>Am'ts brought forw'd,</i>	\$10,950 00	\$333,881 35
3 horses \$100	300 00	
2 horses for superintendent of streets	375 00	
26 double and single carts . .	2,600 00	
43 harnesses	850 00	
4 double sleds, \$200	800 00	
3 single sleds,	100 00	
2 stone crushers and houses .	4,500 00	
2 stone wagons, wagon, carriage, and sleigh	525 00	
Tools, chains, derricks, blankets, etc.	1,800 00	
1 road scraper	150 00	
Boiler for steam drill . .	500 00	
	<hr/>	\$23,550 00

Lighting Department.

For 1369 posts, lanterns, burners, etc. \$10 apiece \$13,690 00

Police Department.

Station-house, building and land, North Village	\$4,000 00	
Furniture and bedding . .	50 00	
Lock-up, furniture and bedding, Ward 1	1,050 00	
Lock-up, furniture and bedding, Ward 6	1,575 00	
Two carriages, sleigh and harness	200 00	
Horse, saddle, bridle and harness	200 00	
15 pairs handcuffs, \$3.75 . .	56 25	
	<hr/>	
<i>Am'ts carried forw'd</i>	\$7,131 25	\$371,121 35

<i>Amounts brought forward,</i>	\$7,131 25	\$371,121 35
30 clubs, \$1.50	45 00	
6 lanterns, \$2.50	15 00	
18 badges	112 00	
18 parade clubs and belts, \$3.50 .	63 00	
Blankets	50 00	
Record books	50 00	
Furniture in station at City Hall	75 00	
	<hr/>	\$7,541 25

School Department.

High School buildings, furniture and land	\$100,000 00	
Mason schoolhouse, furniture and land	49,100 00	
Hyde schoolhouse, furniture and land	24,000 00	
Prospect schoolhouse, furniture and land	31,000 00	
Prospect schoolhouse No. 2 furniture and land	7,500 00	
Oak Hill schoolhouse, furniture and land	12,000 00	
Hamilton schoolhouse, furniture and land	28,000 00	
Williams schoolhouse, furniture and land	10,000 00	
Williams new schoolhouse and land	35,000 00	
Pierce schoolhouse, furniture and land	32,000 00	
	<hr/>	
<i>Am'ts carried forward,</i>	\$328,600 00	\$378,662 60

<i>Amounts brought forward, .</i>	\$328,600 00	\$378,662 60
Davis schoolhouse, furniture and land	13,000 00	
Franklin schoolhouse, furni- ture and land	15,000 00	
Claffin schoolhouse, furniture and land	35,000 00	
Adams schoolhouse, furniture and land	22,000 00	
Bigelow schoolhouse, furniture and land	42,000 00	
Underwood schoolhouse, furni- ture and land	28,000 00	
Lincoln schoolhouse, furniture and land	5,500 00	
Jackson schoolhouse, furniture and land	15,000 00	
Ehot schoolhouse, furniture and land	19,000 00	
Rice schoolhouse and land . .	20,000 00	
New schoolhouse and land, West Newton	21,000 00	
School apparatus	5,000 00	
	<hr/>	\$569,100 00

Water Department.

Building for pipe-fitting, etc., stable and land	\$3,500 00
3 horses, wagons, harness, etc. . . .	500 00
	<hr/>
	\$3,500 00

For cost of water-works, see water construction account.

Table Showing the Number of Polls, Real and Personal Estate of the City, Amount of Tax, Rate per Cent., Appropriations, etc., for Twenty-Six Years.

A. D.	POLLS.	REAL ESTATE	PERSONAL.	TOTAL.	CITY, STATE, AND COUNTY TAX.	RATE.	APPROPRIATIONS.	HOUSES.
1861	2,056	\$5,644,285 00	\$1,955,835 00	\$7,600,120 00	\$57,804 88	\$7 20	\$47,500 00	1,330
1862	1,989	5,476,805 00	2,495,821 00	7,922,620 00	56,559 17	6 60	35,000 00	1,374
1863	1,911	5,504,367 00	2,988,195 00	8,492,562 00	64,968 65	7 20	40,000 00	1,399
1864	2,046	5,637,755 00	2,309,021 00	7,946,776 00	78,000 55	9 50	52,500 00	1,421
1865	2,118	5,756,185 00	3,390,075 00	9,146,260 00	113,991 12	12 00	60,000 00	1,438
1866	2,297	6,394,835 00	4,560,724 00	10,955,559 00	114,149 59	10 00	75,000 00	1,491
1867	2,438	7,227,285 00	4,995,127 00	12,222,412 00	153,990 88	12 20	95,000 00	1,552
1868	2,736	9,104,567 00	5,366,602 00	14,441,169 00	193,208 88	13 00	160,000 00	1,671
1869	2,937	10,288,610 00	5,634,266 00	15,922,876 00	188,990 46	11 50	150,000 00	1,826
1870	3,055	11,407,070 00	6,330,922 00	17,737,992 00	222,514 71	12 20	185,000 00	2,077
1871	3,199	12,770,420 00	6,615,593 00	19,386,013 00	223,521 32	11 20	185,000 00	2,220
1872	3,420	15,792,950 00	8,463,904 00	24,256,854 00	334,314 87	13 50	291,050 00	2,392
1873	3,659	18,446,275 00	7,537,775 00	25,984,050 00	384,089 84	14 50	333,300 00	2,523
1874	3,917	20,032,800 00	8,048,645 00	28,081,445 00	372,893 53	13 00	320,000 00	2,657
1875	4,089	21,073,495 00	7,862,374 00	28,935,869 00	399,085 46	13 50	351,000 00	2,876
1876	4,334	21,128,120 00	7,072,845 00	28,200,965 00	392,201 13	13 60	350,004 99	3,004
1877	4,045	20,007,025 00	6,627,488 00	26,634,513 00	370,319 38	13 60	402,200 00	3,057
1878	3,882	18,604,105 00	6,408,825 00	25,012,930 00	352,942 43	13 80	378,400 00	3,150
1879	4,010	17,456,655 00	6,830,697 00	23,787,352 00	326,959 64	13 40	367,850 00	3,178
1880	4,132	17,718,270 00	7,481,830 00	25,200,100 00	361,137 40	14 00	388,525 00	3,214
1881	4,336	18,238,510 00	8,169,763 00	26,408,273 00	379,434 18	14 00	416,505 00	3,257
1882	4,502	18,930,485 00	7,405,233 00	26,335,718 00	383,633 00	14 20	423,930 00	3,310
1883	4,661	19,794,805 00	7,329,283 00	27,124,088 00	427,033 59	15 40	488,120 00	3,381
1884	4,804	20,467,295 00	7,347,266 00	27,814,561 00	410,137 68	14 40	478,306 88	3,468
1885	4,984	21,134,820 00	7,865,000 00	28,999,820 00	415,965 48	14 00	475,490 00	3,542
1886	5,290	21,977,061 00	9,039,869 00	31,016,930 00	457,051 28	14 40	524,420 00	3,695

TABLE.

Showing Amount Paid for Support of Poor Out of Almshouse from
1851 to 1886 Inclusive.

1851 . . .	\$138 56	1869 . . .	\$2,019 28
1852 . . .	104 94	1870 . . .	2,197 41
1853 . . .	45 70	1871 . . .	3,713 39
1854 . . .	38 10	1872 . . .	2,884 79
1855 . . .	73 63	1873 . . .	3,066 59
1856 . . .	135 49	1874 . . .	3,895 51
1857 . . .	204 96	1875 . . .	5,553 79
1858 . . .	387 61	1876 . . .	9,336 14
1859 . . .	358 25	1877 . . .	10,259 57
1860 . . .	500 81	1878 . . .	8,284 10
1861 . . .	757 14	1879 . . .	8,246 42
1862 . . .	781 50	1880 . . .	6,455 80
1863 . . .	632 27	1881 . . .	6,808 75
1864 . . .	605 02	1882 . . .	7,933 57
1865 . . .	870 77	1883 . . .	8,016 14
1866 . . .	643 72	1884 . . .	7,076 86
1867 . . .	1,268 08	1885 . . .	8,500 15
1868 . . .	1,464 53	1886 . . .	7,661 96

SALARIES OF CITY OFFICERS, 1886.

Mayor	\$1,000 00
City clerk	2,000 00
City treasurer and collector	2,700 00
Assistant treasurer and deputy collector	1,350 00
City auditor	2,000 00
City solicitor	1,000 00
Chairman of assessors	1,200 00
Two assessors, each	750 00
Assistant assessors, each per day	4 00

City messenger	1,100 00
Clerk of Common Council	200 00
Sealer of weights and measures	75 00

HIGHWAY DEPARTMENT.

Superintendent of streets, two horses and carriage furnished	\$1,500 00
City Engineer	2,100 00

FIRE DEPARTMENT.

Chief of department, team furnished	\$1,500 00
Assistant chief and Superintendent of Fire	
Alarm Telegraph, team furnished	1,000 00
Three engineers of steamers, each	950 00
Four drivers of steamers, and Hook and Ladder Co., each	750 00
One driver of hose-carriage No. 4	600 00
Eight foremen of steamers, and Hook and Ladder and Hose Co., each	110 00
Eight assistant foremen, and clerks of steamers, and Hook and Ladder, and Hose Co., each	105 00
Forty-eight hosemen and laddermen, each	100 00

POLICE DEPARTMENT.

City Marshal, team furnished	\$1,500 00
Sergeant of police, \$3 per day	
Fourteen policemen, each	1,000 00
Two policemen	900 00
Two policemen	825 00
First year of service	750 00
Second year of service	825 00
Third year of service	900 00
Fourth and subsequent years	1,000 00

POOR DEPARTMENT.

Seven overseers of poor, each	\$50 00
City almoner and clerk of board	700 00
Warden of almshouse	600 00

WATER DEPARTMENT.

Water registrar	\$1,800 00
Superintendent of water-works, team furnished	1,500 00
Inspector of meters and fixtures	1,200 00
Engineer at pumping station, with house rent .	1,200 00
Fireman and watchman, pumping station with house-rent	600 00

SCHOOLS.

Superintendent	\$2,750 00
One teacher	2,800 00
Six teachers at \$1,900	11,400 00
One teacher	2,200 00
Two teachers at \$1,800	3,600 00
Three teachers	4,800 00
One teacher	800 00
Five teachers at \$1,000	5,000 00
Two teachers at \$950	1,900 00
Sixteen teachers at \$750	12,000 00
Forty-two teachers at \$600	25,200 00
Six teachers at \$550	3,300 00
Six teachers at \$500	3,000 00
Three teachers at \$450	1,350 00
Two teachers at \$300	600 00
One teacher	400 00
Secretary of School Committee	300 00

OFFICERS

OF THE

NEWTON CITY GOVERNMENT.

1887.

Mayor.

J. WESLEY KIMBALL.

Office Hour at City Hall:

3:30 P. M. Daily.

BOARD OF ALDERMEN.

President, GEORGE PETTEE.

Ward One.

J. EDWARD HOLLIS.

Ward Two.

BENJAMIN S. GRANT.

Ward Three.

JAMES H. NICKERSON.

Ward Four.

FREDERICK JOHNSON.

Ward Five.

GEORGE PETTEE.

Ward Six.

JOHN WARD.

Ward Seven.

SETH K. HARWOOD.

STANDING COMMITTEES.

Elections and Returns.

ALDERMEN.

GEORGE PETTEE.

JAMES H. NICKERSON.

Enrolled Ordinances and Resolutions.

ALDERMEN.

BENJAMIN S. GRANT.

FREDERICK JOHNSON.

BOARD OF MAYOR AND ALDERMEN.

Standing Committees.

Police.

THE MAYOR.

ALDERMEN.

SETH K. HARWOOD.

JOHN WARD.

Licenses, Weights and Measures.

ALDERMEN.

FREDERICK JOHNSON.

J. EDWARD HOLLIS.

Regular meetings of the Board, first and third Mondays of each month, 7.15 P. M.

Clerk of Board of Aldermen.

ISAAC F. KINGSBURY.

COMMON COUNCIL.

President, LEWIS E. COFFIN.

Ward One.

LEWIS E. COFFIN.

HERBERT H. POWELL.

Ward Two.

N. HENRY CHADWICK

ELLIS W. REDPATH.

Ward Three.

GEORGE D. DIX.

ANDREW J. FISKE.

Ward Four.

THEODORE W. GORE.

EVERETT E. MOODY.

Ward Five.

EDWARD M. BILLINGS.

EDMUND G. POND.

Ward Six.

HEMAN M. BURR.

HENRY H. READ.

Ward Seven.

J. CHARLES KENNEDY.

WARREN P. TYLER.

Standing Committees of the Common Council.

Enrolled Ordinances and Resolutions.

COUNCILMEN.

ANDREW J. FISKE.

EDMUND G. POND.

HEMAN M. BURR.

Regular meetings of the Common Council, second and fourth Monday of each month, 7:15 P. M.

Clerk of Common Council.

ALBERT S. GLOVER.

JOINT STANDING COMMITTEES OF CITY COUNCIL.

Finance and Salaries.

ALDERMEN.

BENJAMIN S. GRANT.

JOHN WARD.

COUNCILMEN.

PRES. LEWIS E. COFFIN.

WARREN P. TYLER.

THEODORE W. GORE.

Accounts.

ALDERMEN.

FREDERICK JOHNSON.

JOHN WARD.

COUNCILMEN.

ANDREW J. FISKE.

ELLIS W. REDPATH.

HERBERT H. POWELL.

Public Property.

ALDERMEN.

BENJAMIN S. GRANT.

JOHN WARD.

COUNCILMEN.

EDWARD M. BILLINGS.

J. CHARLES KENNEDY.

ANDREW J. FISKE.

State Aid, Soliers' Relief and Military Affairs.

ALDERMEN.

FREDERICK JOHNSON.

JAMES H. NICKERSON.

COUNCILMEN.

EDMUND G. POND.

J. CHARLES KENNEDY.

HERBERT H. POWELL.

Fuel and Street Lighs.

ALDERMEN.

J. EDWARD HOLLIS.

SETH K. HARWOOD.

COUNCILMEN.

ELLIS W. REDPATH.

EDWARD M. BILLINGS.

EVERETT E. MOODY.

Fire Department,

ALDERMEN.

GEORGE PETTEE.

J. EDWARD HOLLIS.

COUNCILMEN.

ANDREW J. FISKE.

ELLIS W. REDPATH.

HEMAN M. BURR.

Highways.

(Inc. Streets and Ways, Sidewalks, Drains and Culverts.)

ALDERMEN.

JAMES H. NICKERSON.

GEORGE PETTEE.

SETH K. HARWOOD.

COUNCILMEN.

PRES. LEWIS E. COFFIN.

THEODORE W. GORE.

N. HENRY CHADWICK.

HENRY H. READ.

Printing.

ALDERMEN.

SETH K. HARWOOD.

COUNCILMEN.

EDWARD M. BILLINGS.

EVERETT E. MOODY.

Ordinances.

ALDERMEN.

BENJAMIN S. GRANT.

FREDERICK JOHNSON.

COUNCILMEN.

ANDREW J. FISKE.

EDMUND G. POND.

HEMAN M. BURR.

Claims.

ALDERMEN.

J. EDWARD HOLLIS.

FREDERICK JOHNSON.

COUNCILMEN.

PRES. LEWIS E. COFFIN.

J. CHARLES KENNEDY.

HEMAN M. BURR.

Alms-house and Poor.

ALDERMAN.

GEORGE PETTEE.

COUNCILMEN.

GEORGE D. DIX.

HENRY H. READ

Assessors' Department.

ALDERMAN.

JOHN WARD.

COUNCILMEN.

N. HENRY CHADWICK.

GEORGE D. DIX.

Highway Surveyors.

ALDERMEN.

JAMES H. NICKERSON.

GEORGE PETTEE.

SETH K. HARWOOD.

COUNCILMEN.

PRES. LEWIS E. COFFIN.

THEODORE W. GORE.

N. HENRY CHADWICK.

HENRY H. READ.

Public Parks, Squares and Burial Grounds.

ALDERMEN.

GEORGE PETTEE.

FREDERICK JOHNSON.

J. EDWARD HOLLIS.

COUNCILMEN.

GEORGE D. DIX.

WARREN P. TYLER.

ELLIS W. REDPATH.

HENRY H. READ.

JOINT SPECIAL COMMITTEES.

Sewerage.

ALDERMEN.

JOHN WARD.

SETH K. HARWOOD.

COUNCILMEN.

N. HENRY CHADWICK.

GEORGE D. DIX.

HEMAN M. BURR.

Rules and Orders.

ALDERMEN.

BENJAMIN S. GRANT.

JAMES H. NICKERSON.

COUNCILMEN.

J. CHARLES KENNEDY.

HEMAN M. BURR.

EVERETT E. MOODY.

Read Fund.

ALDERMEN.

SETH K. HARWOOD.

J. EDWARD HOLLIS.

COUNCILMEN.

PRES. LEWIS E. COFFIN.

J. CHARLES KENNEDY.

HERBERT H. POWELL.

WARREN P. TYLER.

Clerk of Committees.

BENJAMIN F. OTIS.

TRUSTEES OF NEWTON FREE LIBRARY.

JOHN S. FARLOW, *President*.

ALDERMAN PETTEE.	COUNCILMAN TYLER.
JULIUS L. CLARKE.	BRADFORD K. PIERCE.
A. LAWRENCE EDMANDS.	WM. CLAFLIN.

Meetings: First Tuesday in each month, 7 o'clock, P. M.

BOARD OF HEALTH.

THE MAYOR, *ex-officio*.

ALDERMAN BENJ. S. GRANT, <i>President</i> .	
COUNCILMAN HEMAN M. BURR.	J. FRANKLIN FULLER.
JESSE F. FRISBIE.	OTIS PETTEE.

Agent of Board.

NATHAN MOSMAN.

Clerk.

ISAAC F. KINGSBURY.

Agent for Inspection of Plumbing.

ALBERT F. NOYES.

Meetings: First and Third Tuesdays in each month, 4.20 P. M.

WATER BOARD.

EDWARD W. CATE, *President*.

ALDERMAN GEORGE PETTEE.	COUNCILMAN GEORGE D. DIX.
FRANCIS A. DEWSON.	CHAS. FRED CREHORE.

Clerk.

ALBERT S. GLOVER.

SINKING FUND COMMISSIONERS.

GEORGE S. BULLENS.	GEORGE C. LORD
ALDEN SPEARE.	

City Solicitor.

WINFIELD S. SLOCUM.

ASSESSORS.

ISAAC HAGAR, *Chairman*.

SAMUEL M. JACKSON.

HOWARD B. COFFIN.

REGISTRARS OF VOTERS.

GEORGE E. BRIDGES, *Chairman*.

GEORGE H. BOURNE.

RICHARD T. SULLIVAN.

Clerk.

ISAAC F. KINGSBURY.

OVERSEERS OF POOR.

THE MAYOR, *ex-officio*.

Ward One.

EDWIN O. CHILDS.

Ward Two.

E. S. COLTON.

Ward Three.

GEORGE E. ALLEN.

Ward Four.

NATHAN MOSMAN.

Ward Five.

HOSEA C. HOYT.

Ward Six.

GEORGE WARREN.

Ward Seven.

JOHN WARNER.

Clerk.

NATHAN MOSMAN.

Meetings: First Thursday in each month, 3.45 P. M.

SECRETARY OF SCHOOL COMMITTEE.

THOMAS EMERSON (Superintendent of Schools.)

OFFICE AT HIGH SCHOOL.

Hours: Monday, 2 to 4 and 6.30 to 8 P. M.

OFFICERS AT CITY HALL.

P. O. Address, West Newton, Mass.

City Clerk, ISAAC F. KINGSBURY.

City Treasurer and Collector of Taxes, JOHN A. KENRICK.

Deputy Collector of Taxes, MOSES CLARK. JR.

Auditor, BENJAMIN F. OTIS.

City Engineer, ALBERT F. NOYES.

Chairman of Assessors, ISAAC HAGAR.

Water Registrar, ALBERT S. GLOVER.

City Almoner, Clerk of Overseers of Poor, NATHAN MOSMAN.

City Messenger, J. D. WELLINGTON.

City Marshal, DANIEL M. HAMMOND.

OFFICE HOURS:

8.15 A. M. to 12.30 P. M. 2 P. M. to 5 P. M.

Except Saturdays in June, July, August and September,

when the hours are from 8.15 A. M. to 1 P. M.

Chief of Fire Department, HENRY L. BIXBY.

Hours at City Hall, 2 to 5 P. M.

Superintendent of Streets, WILLIAM E. FULLER.

Hours at City Hall, 11.30 to 12 A. M., 4.30 to 5 P. M.

Superintendent of Water Work, H. N. HYDE, JR.

Office at Pipe Yard, Austin Street, Newtonville.

STATISTICS COMPILED BY THE CITY CLERK FROM THE
RECORDS OF HIS OFFICE.

MARRIAGES REGISTERED 1886.

January	17	August	17
February	8	September	18
March	19	October	20
April	11	November	30
May	16	December	20
June	22		
July	18	Total	216

Birthplace of the Above Contracting Parties.

	GROOM.	BRIDE.
United States	131	132
Ireland	44	42
Canada	32	33
England	4	6
Germany	1	1
Scotland	3	-
China	-	1
Australia	-	1
Africa	1	-
Totals	216	216
American	131	132
Foreign	85	84
Totals	216	216

BIRTHS REGISTERED IN 1886.

WARDS.	1		2		3		4		5		6		7		TOTAL.		AGGREGATE.
	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.	MALE.	FEMALE.	
January	2	5	6	2	3	1	2	1	5	3	7	1	22	19	41		
February	7	5	3	3	3	4	1	4	2	2	5	5	20	22	42		
March	3	4	3	2	4	3	4	2	2	2	2	5	19	16	35		
April	-	3	2	3	4	5	3	2	1	1	3	1	15	17	32		
May	8	1	2	3	3	5	5	6	2	3	2	2	25	16	41		
June	5	1	3	1	6	5	3	1	3	3	5	3	23	17	42		
July	4	3	9	3	2	4	4	3	6	1	3	3	29	20	49		
August.	5	-	4	3	7	4	3	5	5	6	2	4	22	18	40		
September	6	4	3	3	3	3	3	3	3	3	4	4	24	24	48		
October	1	4	8	3	3	3	3	1	3	1	5	5	22	19	41		
November	3	6	3	4	3	3	2	4	3	2	3	1	16	22	38		
December	5	2	3	5	2	4	3	5	2	2	2	1	17	20	37		
Totals	49	38	49	32	38	40	36	38	36	27	33	41	15	14	256	230	486
Aggregate	87	81	78	74	63	74	74	63	63	74	29	486					

Birthplace of Parents of Above.

	FATHERS.	MOTHERS.
United States	245	234
Ireland	122	123
England	29	27
Canada	18	17
Nova Scotia	31	40
New Brunswick	16	16
Newfoundland	2	3
Prince Edward's Island	6	12
Scotland	3	2
Germany	5	4
Sweden	2	1
France	—	1
Spain	1	—
Denmark	1	1
Italy	2	2
South America	1	1
India	1	1
West Indies	1	1
Total	486	486
American	245	234
Foreign	241	252
Total	486	486

Birthplace of Parents of Above Deceased Persons.

	FATHERS.	MOTHERS.
United States	140	139
Ireland	81	83
Canada	23	26
England	17	14
Scotland	4	2
Germany	2	2
Italy	1	1
Unknown	7	8
Totals	275	275
American	140	139
Foreign	128	128
Unknown	7	8
Totals	275	275

DEATHS REGISTERED IN 1886.
Statement Showing Causes of Death in Each Month.

	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL.
Accident bicycle - - -	-	-	-	-	-	-	-	-	-	1	-	-	1
Accident, railroad - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Alcoholism - - - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Anæmia - - - - -	-	-	-	3	-	-	-	-	1	-	-	-	4
Apoplexy - - - - -	-	1	1	-	1	-	-	-	-	-	-	-	3
Asthma - - - - -	1	-	-	-	-	-	-	-	-	-	-	-	1
Atrophy - - - - -	1	-	-	-	-	-	-	-	-	-	-	-	1
Back broken - - - - -	-	-	-	-	1	-	-	-	-	-	-	-	1
Birth premature - - -	-	-	-	-	1	-	1	1	2	-	-	-	5
Bowels, consumption of -	-	-	-	-	1	-	-	-	-	-	-	-	1
Bowels, hemorrhage of -	-	1	-	-	-	-	-	-	1	-	-	-	2
Bowels, perforation of -	-	-	-	-	1	-	-	-	-	-	-	-	1
Brain, concussion of - -	-	-	-	-	-	-	-	1	-	-	-	-	1
Brain, disease of - - -	-	1	-	-	-	-	-	-	-	-	-	1	2
Brain, inflammation of -	-	-	-	-	-	-	-	-	-	-	-	1	1
Bright's disease - - - -	-	1	3	1	1	1	-	-	1	-	1	1	10
Bronchitis - - - - -	-	1	2	-	-	2	1	-	-	-	1	2	9
Cancer - - - - -	-	-	-	-	-	2	-	1	1	-	2	1	7
Cardiac Syncope - - - -	-	-	-	-	-	1	-	-	-	-	-	-	1
Cholera infantum - - - -	-	-	-	-	-	-	2	8	1	1	-	-	12
Cholera morbus - - - - -	-	-	-	-	-	-	-	1	-	-	-	-	1
Constipation - - - - -	-	-	-	-	-	-	-	1	-	-	-	-	1
Consumption - - - - -	1	1	3	6	-	4	2	4	-	2	2	2	27
Convulsions - - - - -	-	-	-	-	1	1	1	-	2	1	-	-	6
Croup, membranous - - -	-	1	-	-	-	-	-	-	-	-	-	-	1
Cyanosis - - - - -	-	-	-	-	-	-	-	-	2	-	-	-	2
Debility - - - - -	-	-	1	1	-	-	2	-	-	-	-	1	5
Diabetes - - - - -	-	1	1	-	-	-	-	-	-	-	-	-	2
Diarrhœa - - - - -	-	-	-	1	-	-	-	1	1	1	-	-	4
Diphtheria - - - - -	-	1	1	-	-	-	-	-	-	-	1	-	3
Drowned - - - - -	-	-	-	-	1	-	-	-	-	-	-	-	1
Enteritis - - - - -	-	-	-	-	-	-	-	-	1	1	-	-	2
Epilepsy - - - - -	-	1	1	-	-	-	-	-	-	-	-	-	2
Exhaustion - - - - -	-	-	-	-	-	1	-	-	-	-	-	-	1
Fever, gastric - - - - -	-	-	-	-	-	1	-	-	-	1	-	-	2
Fever, puerpural - - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Fever, scarlet - - - - -	-	-	1	-	-	-	-	-	-	-	-	-	1
Fever, typhoid - - - - -	-	-	1	1	-	1	-	1	1	1	-	-	6
Gangrene - - - - -	-	-	1	-	-	1	-	-	-	-	-	-	2
Glottis, spasm of - - - -	-	-	-	-	-	-	-	-	-	-	-	1	1
Gout - - - - -	-	-	-	-	-	1	-	-	-	-	-	-	1
Hæmophilia - - - - -	-	-	-	-	-	-	-	-	-	1	-	-	1
Heart disease - - - - -	-	-	1	1	1	1	1	2	4	1	2	2	16
Heart, fatty degenera- tion of - - - - -	-	-	-	-	-	1	1	-	-	-	-	-	2
Himiplegia - - - - -	-	1	-	1	-	-	-	-	-	-	-	-	2
Hemorrhage - - - - -	1	-	1	-	-	-	1	-	-	1	-	-	4
Hepatitis - - - - -	-	-	1	-	-	-	-	-	-	-	-	-	1
Hernia femoral - - - - -	-	-	-	-	1	-	-	-	-	-	-	-	1

DEATHS REGISTERED IN 1886.

Statement showing Causes of Death in each Month, (Concluded.)

	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL.
Hydrocephalus - - - -	-	-	-	-	-	1	-	-	-	-	-	-	1
Inanition - - - - -	-	-	1	-	-	-	-	-	-	-	-	-	1
Jaundice - - - - -	-	-	-	-	-	-	-	1	-	-	-	-	1
Lip, cancer of - - -	-	-	-	-	-	-	-	-	-	-	-	1	1
Liquor - - - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Liver, disease of - -	-	-	-	-	-	1	-	-	-	-	-	-	1
Marasmus - - - - -	-	-	-	-	-	-	-	3	1	-	-	-	4
Meningitis - - - - -	-	3	-	-	1	1	3	-	-	-	1	-	9
Old Age - - - - -	-	3	3	2	1	1	2	1	1	2	1	1	18
Paralysis - - - - -	1	1	-	-	-	-	1	1	-	-	1	1	6
Pelvis, disease of - -	-	-	-	-	-	-	-	-	-	-	-	1	1
Pericarditis - - - -	-	-	-	-	-	-	-	-	-	-	1	-	1
Peritonitis - - - - -	-	-	-	-	-	-	-	-	-	1	1	1	3
Pleurisy - - - - -	-	1	-	-	1	-	-	-	-	-	-	-	2
Pneumonia - - - - -	2	1	2	2	2	-	-	2	-	2	2	2	17
Rheumatism - - - - -	-	-	-	1	-	-	-	-	-	-	-	1	2
Scarlatina - - - - -	-	-	-	1	-	-	-	-	-	-	-	-	1
Scrofula - - - - -	-	-	-	-	-	-	1	-	-	-	-	-	1
Septicæmia - - - - -	-	-	-	-	-	-	-	-	-	-	1	-	1
Stillborn - - - - -	2	3	2	-	1	3	2	1	2	4	1	3	24
Stomach, Carcmonia of -	-	-	1	-	-	-	-	-	-	-	-	-	1
Stomach, inflammation of	-	-	-	-	-	-	-	-	-	-	1	-	1
Teething - - - - -	-	-	-	1	-	-	-	1	1	-	-	-	3
Thigh broken - - - -	-	-	-	-	-	-	-	1	-	-	-	-	1
Tuberculosis - - - -	-	1	-	1	-	-	1	-	-	-	-	-	3
Tumor - - - - -	-	-	1	-	-	-	-	1	1	-	-	-	3
Unknown - - - - -	-	-	-	-	-	1	-	-	-	-	-	-	1
Whooping Cough - - -	-	-	-	-	-	-	-	2	-	-	-	-	2
Total deaths in each mo.	9	24	29	23	16	26	26	35	24	21	19	23	275

OFFICE FEES.

DR.

Agreement of fence location	25
Assignment of wages	\$11 00
Assignment of wages, discharged	2 25
Assignment of account	2 00
Assignment of income	1 00
Attachments	25
Bills of sale	4 25
Bills of sale, assigned	25
Bills of sale, discharged	25
Foreclosure of pledge	50
Licenses, auctioneer	22 00
Licenses, innholder	1 00
Licenses, intelligence office	18 00
Licenses, junk	24 00
Licenses, marriage	102 50
Mortgages	91 20
Mortgages, assignment of	2 75
Mortgages, discharged	9 25
Naturalization certificate	1 00
Woman certificate of business on own account	25

Total receipts	\$293 95
--------------------------	----------

Dogs Licensed.

1,095 males at \$2	2,118 00
144 females at \$5	720 00

Total receipts for dogs	\$2,838 00
-----------------------------------	------------

Aggregate collections	\$3,131 95
---------------------------------	------------

CR.

By office fees paid monthly to city treasurer	298 95	
Retained from dog license receipts, and paid to city treasurer, 1,203 licenses, at 20c.	240 60	
Paid county treasurer . . .	2,597 40	
	<hr/>	
	\$2,838 00	\$3,131 95

Dogs are Distributed in the Various Wards as Follows:—

	1	2	3	4	5	6	7	To'ts.
Males	128	190	168	151	123	201	98	1059
Females	22	24	23	14	14	36	11	144
	150	214	191	165	137	237	109	1203

Registered Voters. (From List used at City Election, Dec. 7.)

Wards,	1	2	3	4	5	6	7
	412	596	519	478	433	484	402
Total	3321.						

Enrolled Militia.

Wards,	1	2	3	4	5	6	7	Total.
	513	581	332	402	433	604	405	3270
1885	394	509	319	262	495	623	390	2992
Gain	.	.	.	.	.	.	.	278

All the wards show a gain except Ward 5 where there is a loss of 62 and Ward 6 where there is a loss of 19.

CITY OF NEWTON

ANNUAL REPORT

OF THE

CITY ENGINEER,

FOR THE YEAR 1886.



NEWTON:

PRESS OF THE NEWTON JOURNAL.

1887.

OFFICERS OF CONTROLLING BOARDS AND COMMITTEES.

Chief Executive Officer (*ex officio*).

HIS HONOR THE MAYOR, J. WESLEY KIMBALL.

Joint Standing Committee on Highways.

ALDERMAN JAMES H. NICKERSON, Chairman.

Water Board.

EDWARD W. CATE, President.

Board of Health.

HIS HONOR THE MAYOR, J. WESLEY KIMBALL, President (*ex officio*.)

Joint Standing Committee on Public Property.

ALDERMAN BENJAMIN S. GRANT, Chairman.

Joint Standing Committee on Parks.

ALDERMAN SAMUEL L. POWERS, Chairman.

CITY ENGINEER'S DEPARTMENT.

City Engineer.

ALBERT F. NOYES.

Principal Assistant Engineer.

FRED. H. BARNES.

Assistant Engineers.

WILLIAM S. FRENCH.

I. W. HASTINGS.

Transitmen and Levellers.

WILLIAM P. MORSE.

ARTHUR L. WOODRUFF.

REPORT.

CITY ENGINEER'S OFFICE, CITY HALL,
WEST NEWTON, MASS., Dec. 31, 1885.

To the Honorable City Council.

GENTLEMEN,—In compliance with Section 5 of Ordinance No. 9, I herewith respectfully submit the Annual Report of the City Engineer's Department for the year 1885.

Amount appropriated for the year	. . .	\$6,750 00
Amount received from the Board of Health	. . .	534 64
Total	. . . . .	\$7,284 64
Amount expended	. . . . .	7,283 79
Amount unexpended	. . . . .	\$ 0 85

CLASSIFICATION OF EXPENDITURES.

For salaries of city engineer, assistants, draughtsman, and rodmen	. . . . .	\$6,137 83
For car fares and other incidentals	. . . . .	390 16
For horse, harness, wagon and sleigh	. . . . .	413 75
For care and keeping of horse, wagon, etc.,	. . . . .	224 43
For instruments and repairs	. . . . .	49 20
For drawing paper and other supplies	. . . . .	42 42
For horse hire	. . . . .	26 00
Total amount	. . . . .	\$7,283 79

The item of salaries of city engineer and assistants may be divided as follows:—

For defining street lines; making surveys and maps, the examination of titles and draughting of reports, orders and releases for street widenings, acceptance and extension; office records; defining and establishing proposed grades of streets; surveys, plans, profiles and estimates for proposed work on highways; and all work relating to highways	\$2,567 66
For clerical work in keeping highway accounts	615 14
For establishing lines and grades for the extension of water pipes, locating and measuring service pipes, and for all work relating to water works	968 18
For plans, estimates, reports, inspection of plumbing, correspondence, and for all work relating to the Board of Health	571 90
For defining lines and grades for the construction of drains and culverts, making preliminary surveys, plans, profiles, diagrams, estimates, calculations, and all work relating to drains	437 22
For defining the lines, surveys and plans of city property, making plans and specifications for the alteration and repairs on old buildings and superintending the execution of the same, under the direction of the Joint Standing Committee on Public Property	397 44
For copying all Newton plans at Registry of Deeds and County Commissioners' office and indexing the same; and for all indexing of other plans, deeds, field work, etc.,	270 19
For making survey and levels for plans, profiles and estimates for the use of the City Solicitor in suits for or against the city; for attend-	

ing court, and for all work relating to said suits	190 62
For defining the lines, grading, making surveys and plans of the various parks; and for all other work under the direction of the Joint Standing Committee on Parks	92 60
For all other miscellaneous work	26 88
Total amount	<hr/> \$6,137 83

Surveys have been made of the whole or a part of twenty streets covering a length of three and three-tenths miles. One hundred and forty-two plans and profiles have been made. Levels have been taken over the whole or a part of forty streets or brooks, a total length of nine and four-tenths miles. Lines have been established on thirty-eight streets and grades on sixty-five streets. The total length of grades given was seven and five-tenths miles. A survey has been made of the district lying between the Boston & Albany Railroad, Washington street and the Boston line. Also a survey has been made of the vicinity of the Circuit Railroad between Washington street and Grove street for the proposed improvement in the vicinity of the Woodland station. These surveys have been plotted upon district maps. The total number of plans, profiles, tracings etc., now in the office is 2,625.

The minimum number of assistants employed during the past year is five; average number, six; and the maximum number at any time, nine.

Upon the following named streets, plans and profiles have been made; lines and grades defined; titles and boundaries of the abutting estates examined; reports, orders, and releases drawn; and said streets have been laid out and accepted by the City Council:—

Streets Accepted in 1886.

STREET.	FROM	TO	WIDTH IN FEET.	LENGTH IN FEET.
Allston.....	Mt. Vernon Street.....	northerly	40	302
Arlington.....	East of Pembroke Street.....	Brighton Street.....	40	773
Circuit Avenue...	Boylston Street.....	Elliot Street.....	50	1467
Copley.....	Washington Street.....	Hummewell Avenue.....	40	560
Crescent.....	Faxon Street.....	California Street.....	40	1357
Emerson.....	Pearl Street.....	Boyd Street.....	30	547
Faxon.....	Watertown Street.....	Crescent Street.....	40	306
Hollis.....	Centre St., near Franklin St..	Centre St., opp. Wesley St..	40	665
Hyde Avenue.....	Centre Street.....	Sargent Street.....	40	1645
Irving.....	Marshall Street.....	northerly	40	583
Kingsbury.....	Hammond Street.....	southwesterly	40	452
Marlboro.....	Arlington Street.....	Tremont Street.....	40	525
Melrose.....	Seaverns Street.....	Staniford Street.....	40	1240
Meredith Avenue.	Boylston Street.....	Circuit R. R.....	50	307
Morse.....	Walnut Street.....	Hull Street.....	40	742
Rice.....	Summer Street.....	Centre Street.....	40	533
Wiswall.....	Cross Street.....	Parsons Street.....	40	380
Total.....	.....	.....2.35 miles.....	.....OF.....	12,384

The area on the north side of Beacon Street, west of Walnut Street, originally taken for slopes, was discontinued. The abutters releasing to the city the right to slope on their estate at such time as the street shall be re-graded.

The corners of Grant Avenue and Beacon Street were rounded and a small plat of grass will be laid down in the centre, at the intersection of the two streets.

River Street, between Waltham and Cherry Streets, was ordered widened, under the betterment law, to the regular width of forty feet. The work contemplated is an improvement long needed.

Waverly Avenue, between Tremont and Washington Streets, was widened to a width of fifty feet, re-graded and rebuilt.

The routine work of the office, the system of accounts and the copying and indexing of all Newton plans at the Registry of Deeds, County Commissioners, or Clerk of the Court's offices, also all private land plans obtainable, has been continued as outlined in previous reports.

These plans are open to the use of the public and are becoming of greater value every year. Referring to this subject, it may not be out of place to copy the following information from my report to the City Council for the year 1884:—

“These (plans) are carefully indexed under their respective heads and placed where they can be readily referred to. It is my desire to make the records of the Department convenient and valuable to the public. Already has this scheme proven of great value to persons having mislaid their original plans, and have found copies of the same on file; or, where persons desiring to find plans of certain properties, after examining various places at considerable expense, have found copies here of what they wanted. Where a series of

plans of the same properties have been made, showing subdivisions or changes, copies are arranged for easy reference or comparison. I might here suggest that any person having any plans of Newton property, by sending them to this office, copies will be made and placed on record free of expense to them, the original returned, and the copy can be at any time referred to, should the original be lost or not of easy access."

HIGHWAY DEPARTMENT.

Highway Surveyors and Joint Standing Committee on Highways.

ALDERMAN JAMES H. NICKERSON, Chairman.

ALDERMAN GEORGE M. FISKE.

ALDERMAN GEORGE PETTEE.

COUNCILMAN CHARLES W. ROSS.

COUNCILMAN N. HENRY CHADWICK.

COUNCILMAN LEWIS E. COFFIN.

COUNCILMAN J. CHARLES KENNEDY.

EXECUTIVE OFFICERS.

Superintendent of Streets.

WILLIAM E. FULLER.

Assistant Superintendents of Streets.

GEORGE E. STUART, Wards 1, 2 and 7.

JOHN J. WARE, Wards 3 and 4.

JOHN A. PECK, Wards 5 and 6.

City Engineer.

ALBERT F. NOYES.

HIGHWAYS.

At the beginning of the year the committee was enlarged from five to seven members, one member representing each ward. And the Joint Standing Committee on Highways, Streets and Ways, Sidewalks, Drains and Sewers became the Joint Standing Committee on Highways, having under its management the repairs, building and rebuilding of streets, drains, culverts, sidewalks, etc., and the gravel lands. Alderman Pettee and Councilmen Coffin, Chadwick and Kennedy were new members of the committee.

The executive officers of the department remained the same. A change was made in the districts of the Assistant Superintendents, by which the Superintendent gave up the immediate control of Ward 3 and devoted his time entirely to the general supervision of the work. The Assistant Superintendents were assigned as follows:—George E. Stuart to Wards 1, 2 and 7, John J. Ware to Wards 3 and 4, and John A. Peck to Wards 5 and 6. The policy of thoroughly constructing several miles of streets each year has been continued during the past year.

A boiler for use with the steam drill has been purchased and added to the machinery of the department, which now consists of a 15 ton steam road roller, a portable engine, a portable stone crusher, a stationary engine, a stationary stone crusher and a steam drill and boiler. All of the machinery has been under the careful attention of William

Kent and is in excellent condition. During the season the steam road roller has picked up 30,650 square yards of macadamized road, and has laid down 66,535 square yards of Telford, macadamized or gravel road; it has also been let to the Town of Quincy for five weeks and to the Town of Brookline for four days, and has given excellent satisfaction.

A large tract of land on Murray Street has been purchased upon which is located a ledge of hard rock closely resembling trap. A stone crusher is soon to be located on this land and the stone broken for street purposes. As the land is centrally located it will furnish stone for a large portion of the city. About one and one-half acres of land on Pine Street has been bonded of Michael Lester and will probably be purchased the coming year. This land joins a tract purchased last year of the Union Institution for Savings, and contains a coarse, hard gravel and stone suitable for paving and crushing purposes.

In the early part of February occurred a freshet or flood of unusual magnitude; six inches of rain fell during February 11, 12 and 13, melting and carrying away a great depth of snow which had accumulated. All the brooks overflowed the low lands in their vicinity and in many places rose over the roadways doing great damage to them. At the Pettee Machine Works a vast amount of water had accumulated in the meadows above, which burst the dam and then broke through the Oak Street embankment and washed away quite a portion of Needham Street. On the Charles River, the bridge at Nahanton Street and the foot bridge at Newton Lower Falls were washed away and the Washington Street bridge at Newton Lower Falls seriously damaged. As it was necessary that these damages should be repaired immediately and no provision had been made in the annual appropriation for such an extra expenditure, the City Council appropriated

the additional sum of \$10,550 for this purpose.

The Boston and Albany Railroad having fenced its track on the northerly side opposite the Auburndale station, all persons living upon that side of the track were obliged to pass over the Auburn Street bridge in order to reach the station. To obviate this difficulty a subway was constructed under the track near Hancock Street. A portion of the expense of the same was borne by the citizens of Auburndale and the Boston and Albany Railroad contributed towards the cost of drainage for the subway. The drain was laid through Auburn, Melrose and Seaverns Streets to the brook at Lexington Street.

A number of concrete sidewalks having become out of repair to such an extent as to be unsafe for travel, a large proportion of the appropriation for sidewalks has been expended in repairing or rebuilding the same. This has been a step in the right direction but a greater ultimate saving could be effected by a systematic maintenance of these sidewalks. Upon this subject I feel it would not be out of place to copy a portion of the City Engineer's Report to the City Council for the year 1883.

"The policy of the town and city governments for the past twelve or fourteen years has been to encourage the laying of concrete (coal-tar and pitch-mastic) sidewalks; so that now there is a considerable mileage of concrete sidewalks laid. With no special repairs, the life of a concrete sidewalk, if unaffected by causes other than wear, has been, in this city, from six to ten or more years.

The causes for the destruction of concrete are, legitimate wear, the upheaval or breaking by the frost or the growth of roots of trees, the settlement of poor foundations, and drainage; and the greater cause by far, which is usually assigned to wear, is the loss of the volatile oils which it con-

tains, leaving the surface rough and brittle, to be the more readily affected by ordinary wear. The cost of these renewals, without special repairs, at the present price of laying the concrete, is from six to ten cents per year; the probable average with the best of work being about eight cents. After laying one or two years, the surface becomes slightly rough, and it is found that a thin coating of sand and tar, or pitch, if applied at this time (at a cost of about six cents per square yard), restores the smooth, pliable surface, and will last for two or three years longer, without necessity for renewal. If the sidewalk is left for four or more years, it can usually be restored by a skim coating of fine gravel and tar, or pitch, at a cost of about thirty-five cents per square yard. It will be observed that the cost of maintaining sidewalks, without any special repairs, is about eight cents per square yard, besides the discomfort of traveling for four or more years over rough sidewalks; with occasional repairs and skim coating, and allowing for breaks from outside causes, about the same amount as above, and perhaps one or two year's travel over a rough sidewalk; with constant repairs, as above described, and allowing for breaks from outside causes, the cost is about four or five cents per square yard. The question of economic maintenance of these sidewalks has become a serious one; and there are now miles of sidewalk needing immediate attention in order to remain safe and convenient for travel. I would therefore recommend, in view of its economy and comfort, that constant repairs be made as above described."

The following is a statement of the expenditures under the several appropriations controlled by the Highway Committee.

CURBING.

Amount appropriated by order of the City Council for the year 1886 .	\$1,500 00
Amount charged to appropriation for curbing as per Auditor's records	\$1,500 00
Amount charged by Auditor to other appropriations	288 11
	<hr/>

Total amount expended as per
Superintendent's and Assistant Super-
intendent's records of work . . . \$1,788 11

The following table shows the number of linear feet,
kind and cost of curbing which has been laid : —

CURBING LAID IN 1886.

STREET.	WARD.	LINEAR FEET OF STRAIGHT CURBING.	LINEAR FEET OF CURVED CURBING.	TOTAL LENGTH OF CURBING.	COST.
Channing, (re-setting) .	1, 7	6 06	—	6 06	\$219 71
Chestnut	5	62 00	6 50	68 50	78 89
Church	1	214 40	—	214 40	200 40
Elliot	5	44 65	6 50	51 15	68 02
Elmwood	7	46 20	51 17	97 37	105 81
Margin	3	183 65	—	183 65	127 08
Park	7	172 40	51 16	223 56	224 24
Pelham (re-setting) . .	6	197 25	—	197 25	154 06
Putnam	3	—	—	—	4 88
Walnut	2	472 54	35 34	507 88	458 98
Waltham	3	148 35	3 18	151 53	97 16
Stock		76 25	6 38	82 63	47 88
Miscellaneous					1 00
Totals		1623 75	160 23	1783 98	\$1788 11

DRAINS AND CULVERTS.

Amount appropriated by order of the City Council for the year 1886	\$12,000 00	
Amount of additional appropri- ations	2,803 75	
	<hr/>	
Total appropriation		\$14,803 75
Amount charged to appropriation for drains and culverts as per Auditor's records	\$14,779 63	
Amount charged by Auditor to other appropriations	211 21	
	<hr/>	
Total amount expended as per Superintendent's and Assist- ant Superintendent's records of work		\$14,990 84

The following tables show the cost, etc., of the catch-basins, culverts and drains, constructed or reconstructed during the year and the streets in which the same were built.

CATCH-BASINS CONSTRUCTED AND RECONSTRUCTED IN 1886.

STREET.	LOCATION.	COST.	REMARKS.
Channing	\$0 25	Repairs.
Dedham.	48 25	
Jefferson	30 46	
Lexington and River	at junction.	258 58	3 catch-basins and repairs.
Newtonville Avenue	near Summit Street	50 96	
Oak	18 01	
Park	8 75	Repairs.
Sargent	4 38	
Station	23 51	
Tremont	3 25	Repairs.
Miscellaneous	33 97	
Total	\$480 37	

CULVERTS CONSTRUCTED AND RECONSTRUCTED IN 1886.

STREET.	LOCATION.	COST.	REMARKS.
Boylston	corner of Walnut Street	\$ 11 50	Repairs.
Centre . . . . .	. . . . .	26 12	Repairs.
Cheese Cake Brook	north of Washington Street	1,117 08	Ext'nd'g and covering in Porter estate.
Cherry	at Stroud's estate	63 22	
Fuller	near Cheese Cake Brook	3 25	
Hancock . . . . .	. . . . .	4 20	
Hillside Avenue . . . . .	. . . . .	12 50	Repairs.
Nahanton . . . . .	. . . . .	175 53	
Washington	Pierce School yard	15 00	Repairs.
Washington	at W. P. Holden's	3 46	
Winter . . . . .	. . . . .	3 66	
Woodbine . . . . .	. . . . .	3 50	
Total, . . . . .	. . . . .	\$1439 02	

DRAINS CONSTRUCTED IN 1886.

STREET.	SIZE IN INCHES.	LENGTH IN FEET.	MAN- HOLES.	CATCH BASINS	Feet of Size of Inlets.	COST.	LOCATION.
Bellevue . . .	8	30 00				\$20 71	At B. & A. R. R.
Bridge . . .	12	455 20		2	10 00 } 24 00 }	349 16	{ Through Nonantum Mills Est.
Harvard . . .	12	233 00	1	2	30 00 } 6 00 }	273 80	{ Newtonville Ave. to Spruce St.
Hollis . . .	10	234 00		2	14 00 } 8 00 }	162 21	{ To Branch of Hyde's Brook.
Hyde's Brook .	54x36 45x30 36x24	93 84 220 00 664 76		8	48 00 } 98 00 } 58 00 }	3,517 74	{ Changing course from Church to Franklin Sts.
Margin . . .	15 12 10	118 00 60 00 170 00	1	2	124 00 } 16 00 }	222 17	{ Near depot.
Melrose . . .	18 15 12	74 35 523 83 113 80	3	3	85 40 } 92 15 }	2,650 29	{ Seaverns St. to B. & A. R. R.
Mt. Vernon P'k }	5 15 12	735 03 510 00 277 75		8	132 80 } 8 00 }	1,045 30	{ Allston St. to B. & A. R. R.
Mt. Vernon .	12	338 00		2	16 00 } 2 00 }	295 68	{ Mt. Vernon St. to near B. & A. R. R.
Newtonville Ave	12	36 00				12 60	{ Repairs near Mt. Ida St.
Seaverns . . .	20	556 50	4		14 45 } 9 00 }	880 39	{ Lexington St. to Melrose St.
Tremont . . .	12	849 00	5	1	80 00 } 10 00 }	765 11	{ Near Boston Line.
Washington . .	12	702 00		4	70 00 } 30 00 }	444 06	{ Near Wales St.
Totals . . .		6,995 06	14	34	944 80	\$10,639 22	

The following miscellaneous items of expenditure have also been charged to drains and culverts:

Adams Street, cleaning drain	\$24 00
Bemis Street, bridge over Charles River, repairs .	32 96
Brighton Street, cleaning drain	22 90
Cheese Cake Brook, cleaning	270 82
Cheese Cake Brook, repairs	10 75
Chestnut Street	4 25
Cleaning catch-basins	933 93
Cranberry Street, iron pipe culvert	28 34
Highland Street, manhole cover	0 75
Hyde's Brook, cleaning and repairs	33 74
Kenilworth Street, drain	25 00
Linwood Avenue, cleaning drain from Page estate	11 64
Murray Street, cleaning drain	28 00
Newtonville Avenue, near Harvard Street .	1 18
Newtonville Drain, cleaning	49 62
Newtonville Square improvement	10 50
Otis Street, near Fountain Street	21 13
South Meadow Brook, deepening at Pettee Machine Co.	24 00
Stock on hand, paid for from appropriation for 1886:	
Akron Pipe	\$33 96
Bricks	10 35
Cement	39 42
Covering Stone	14 99
Grates	313 50
	<hr/>
	\$412 22
Ward Street, improvement	1 30
Washington St., near Waverly Ave., catch-basins	15 75
Sundries	469 45
	<hr/>
Total	\$2432 23

SUMMARY OF EXPENSES, CHARGED TO THE APPROPRIATION
FOR DRAINS AND CULVERTS.

Catch-basins constructed or reconstructed	\$480 37
Culverts constructed or reconstructed	1439 02
Drains constructed	10,639 22
Miscellaneous expenses	2,432 23
	<hr/> \$14,990 84

FLOOD.

Amount appropriated by order of the City Council	\$10,000 00
Amount of additional appropriation by the City Council	550 00
	<hr/>
Total appropriation	\$10,550 00
Amount expended	10,550 00
	<hr/>

The whole amount was charged by the Auditor to Highways, General Repairs; and has been expended upon the following work:

Baptist Pond	\$229 42
Beacon Street	3 58
Boylston Street	64 65
Centre Street	10 32
Concord Street	272 35
Foot Bridge over Charles River at Newton Lower Falls	350 00
Harvard Street	5 25
Homer Street	92 98
Hyde's Brook	42 07
Lexington Street	6 90
Mt. Vernon Street	7 35
	<hr/>
<i>Amount carried forward</i>	1,075 87

<i>Amount brought forward</i>	1,075 87
Nahanton Street, Bridge over Charles River .	1,821 30
Needham Street	549 78
Oak Street	5,056 54
Pearl Street, at Laundry Brook Culvert .	195 77
South Street	351 52
Warren Street	23 27
Washington Street	28 90
Care of water, etc.	1,447 05
Total	<u>\$10,550 00</u>

GRAVEL LANDS.

Amount appropriated by order of the City Council for the year 1886	\$2,000 00
Amount of additional appropriation by order of the City Council, from sale of land	567 00
Total appropriation	<u>\$2,567 00</u>
Amount expended as per Auditor's records	1,259 57
Balance unexpended.	<u>\$1,307 43</u>
The above amount has been expended in the following manner :	
California Street, near Allison's pit, storage room	\$14 82
Murray Street, land on	1,000 00
Newtonville Avenue, near Harvard Street, gravel for improvement	40 70
Pine Street, gravel	100 00
Washington Street, Lower Falls, gravel for im- provement	73 00
Sanding sidewalks, sand and gravel for . .	22 55
Miscellaneous purposes, gravel for	8 50
Total	<u>\$1,259 57</u>

HIGHWAYS, GENERAL REPAIRS.

Amount appropriated by order of the City	
Council for the year 1886	\$55,000 00
Amount of additional appropriation for the flood	10,550 00
Amount received from various sources	3,531 32
Amount charged by Auditor to Auburndale	
Subway	6,573 23
	<hr/>
Total appropriation	\$75,654 55
Amount expended as per Auditor's records	76,466 58
	<hr/>
Balance overdrawn	\$812 03
Amount charged for maintenance as per Superintendent's and Assistant Superintendent's records of work (including work at Auburn-dale Subway)	\$61,025 87
Amount charged to Flood	10,550 00
Amount charged by Auditor in excess	4,890 71
	<hr/>
Total amount expended	\$76,466 58

The following table will show in detail the amount expended on each street for maintenance as made up from the Superintendent's and Assistant Superintendent's records of work: —

Adams	\$47 34
Auburn	48 13
Auburndale Avenue.	76 38
Austin	1 75
Beach	13 25
Beacon	98 25
Bellevue	385 94
Bowers	7 25
	<hr/>
Amount carried forward	\$678 29

<i>Amount brought forward</i>	.	.	.	.	.	.	.	\$678 29
Boyd	.	.	.	.	.	.	.	5 57
Boylston	.	.	.	.	.	.	.	2,452 38
Bridge	.	.	.	.	.	.	.	2 75
Brookline	.	.	.	.	.	.	.	138 45
Cabot	.	.	.	.	.	.	.	14 07
Cemetery Avenue	.	.	.	.	.	.	.	67 25
Central Avenue	.	.	.	.	.	.	.	69 27
Centre	.	.	.	.	.	.	.	102 53
Channing	.	.	.	.	.	.	.	216 03
Cherry	.	.	.	.	.	.	.	67 00
Chestnut	.	.	.	.	.	.	.	223 87
Church	.	.	.	.	.	.	.	154 80
Cook (Ward 5)	.	.	.	.	.	.	.	9 48
Cottage	.	.	.	.	.	.	.	100 50
Crafts	.	.	.	.	.	.	.	7 87
Cypress	.	.	.	.	.	.	.	80 75
Dedham	.	.	.	.	.	.	.	194 90
Derby	.	.	.	.	.	.	.	60 75
Dudley	.	.	.	.	.	.	.	66 25
Eldridge	.	.	.	.	.	.	.	12 25
Elliot	.	.	.	.	.	.	.	24 38
Elmwood	.	.	.	.	.	.	.	10 38
Fairmont Avenue	.	.	.	.	.	.	.	21 50
Farlow Park	.	.	.	.	.	.	.	12 25
Floral	.	.	.	.	.	.	.	9 60
Franklin	.	.	.	.	.	.	.	293 32
Gardner	.	.	.	.	.	.	.	1 75
Greenough	.	.	.	.	.	.	.	53 85
Hammond	.	.	.	.	.	.	.	170 50
Hartford	.	.	.	.	.	.	.	351 94
High	.	.	.	.	.	.	.	18 75

Amount carried forward \$5,693 26

<i>Amount brought forward</i>	.	.	.	.	.	\$5,693 26
Highland Avenue	.	.	.	.	.	41 62
Highland	.	.	.	.	.	173 75
Hillside Avenue	.	.	.	.	.	26 25
Hollis	.	.	.	.	.	13 06
Homer	.	.	.	.	.	225 80
Hunter	.	.	.	.	.	17 15
Ivanhoe	.	.	.	.	.	41 58
Jackson	.	.	.	.	.	14 75
Jefferson	.	.	.	.	.	5 00
Kenilworth	.	.	.	.	.	45 57
Kenrick	.	.	.	.	.	108 15
Lagrange	.	.	.	.	.	289 03
Lake Avenue	.	.	.	.	.	215 15
Lexington	.	.	.	.	.	233 37
Lincoln	.	.	.	.	.	3 50
Lowell	.	.	.	.	.	6 00
Margin	.	.	.	.	.	520 34
Melrose	.	.	.	.	.	52 25
Montrose	.	.	.	.	.	38 57
Mt. Vernon	.	.	.	.	.	22 25
Myrtle	.	.	.	.	.	3 25
Nahanton	.	.	.	.	.	80 35
Needham	.	.	.	.	.	44 50
Newtonville Avenue	.	.	.	.	.	478 02
Newtonville Square	.	.	.	.	.	71 58
Nonantum	.	.	.	.	.	4 66
Nonantum Square	.	.	.	.	.	53 60
Oak	.	.	.	.	.	474 14
Oak Hill District	.	.	.	.	.	329 73
Orchard	.	.	.	.	.	4 67
Otis	.	.	.	.	.	40 75

Amount carried forward . . . \$9,371 65

<i>Amount brought forward</i>	.	.	.	.	.	\$20,540 38
Watertown (Special)	.	.	.	.	.	1,036 59
Waverly Avenue	.	.	.	.	.	216 73
Webster	.	.	.	.	.	233 89
Winchester	.	.	.	.	.	456 00
Woodland Avenue	.	.	.	.	.	115 50
Auburndale Subway	.	.	.	.	.	6,573 23
Cleaning crossings	.	.	.	.	.	712 23
Cleaning gutters	.	.	.	.	.	7,097 08
Exchange of carts	.	.	.	.	.	380 00
Exchange of horses	.	.	.	.	.	1,322 00
Gravel pits	.	.	.	.	.	7,752 27
Mowing weeds	.	.	.	.	.	601 84
Patching streets	.	.	.	.	.	1,500 72
Paving around stand pipes	.	.	.	.	.	159 25
Picking stones	.	.	.	.	.	1,151 21
Portable crusher	.	.	.	.	.	7 88
Removing snow	.	.	.	.	.	6,477 52
Steam drill	.	.	.	.	.	491 30
Steam roller	.	.	.	.	.	507 86
Street signs	.	.	.	.	.	285 32
Superintendent's salary	.	.	.	.	.	1,500 00
Trimming trees	.	.	.	.	.	113 51
Miscellaneous	.	.	.	.	.	1,793 56
Total	.	.	.	.	.	<u>\$61,025 87</u>

The principal work performed has been upon the following streets in the following manner:

Margin Street, near Chestnut Street; Park Street, between Franklin Street and Sargent Street; Ward Street, near W. H. Ireland's; Washington Street, at Auburn Street and near the Circuit R. R.; and Watertown Street, from Crafts Street to Nevada Street were macadamized and rolled.

Boylston Street, from Parker Street to Centre Street; Hartford Street; Lagrange Street; South Street, from Ward Street to Boston Line; Sumner Street, near Marshall Street; and Winchester Street were gravelled and rolled.

On Newtonville Avenue, west of Harvard Street, the grade was raised, and the street macadamized and rolled.

On Washington Street, from Beacon Street to Wales Street, the hill was cut down and the grade improved, the street was built to its full width, macadamized and rolled.

HIGHWAYS, WIDENING, RECONSTRUCTION AND IMPROVEMENTS.

Amount appropriated by order of the City

Council for the year 1886	\$22,000 00
-------------------------------------	-------------

Amount expended as per Auditor's records	21,220 97
--	-----------

Balance unexpended	\$779 03
------------------------------	----------

The above amount has been expended upon the following streets and for the following purposes:—

STREET.	WARD.	LOCATION AND DESCRIPTION OF WORK.	AMOUNT
Beacon Street and Grant Ave...	6	Rounding and filling corners.....	\$541 72
Bellevue.....	1	Reconstruction from Summit Street to Howard Street.....	1,562 77
Circuit Avenue.....	5	Construction from Boylston Street southerly.....	2,429 47
Kearick.....	7	Reconstruction from Waverley Ave. to near Magnolia Ave.	1,290 60
Lexington and River.....	4	Widening at southerly corner.....	136 63
Newtonville Avenue.....	1	Construction of retaining bank at Miller's.....	643 35
Newtonville Avenue.....	2	Reconstruction at Harvard Street.....	881 38
Newtonville Square.....	2	Improvement and widening.....	1,504 61
Oak.....	5	Widening southwest corner of Chestnut Street.....	53 75
Summit.....	1	Paving gutters, etc.....	1,038 51
Ward.....	6	Reconstruction west of Grant Avenue.....	2,242 65
Washington.....	4	Reconstruction from Beacon Street to Wales Street.....	5,578 91
Waverley Avenue.....	7	Reconstruction and drainage, Tremont St. to Washington St.	3,137 18
Setting Bound Stones.....		.....	142 21
Miscellaneous.....		.....	37 23
			\$21,220 97

LAND DAMAGES.

Amount appropriated by order of the City Council for the year 1886	\$2,000 00
Amount expended as per Auditor's records	1,525 00

Balance unexpended	\$475 00
------------------------------	----------

The above amount has been expended on the following named streets : —

Auburn and Grove Streets, for land taken for rounding of corner on estate of Alfred B. Darling	\$25 00
Cheese Cake Brook, for drainage rights through the estate of Martha A. Porter	500 00
Murray Street, land bought of the heirs of George J. Carleton to be used as a gravel and ledge pit	1,000 00
Total	\$1,525 00

REMOVAL OF ASHES.

The collection of ashes is made by the highway department, under the direction of the Highway Surveyors.

Amount appropriated by order of the City Council for the removal of ashes for the year 1886	\$3,500 00
Amount expended as per Auditor's records	3,211 83

Balance unexpended	\$288 17
------------------------------	----------

The following statement will show the cost of the collection of ashes for each ward, and the day of the week on which the collection is made : —

Wards 1 and 7, Thursday	\$1,053 62
Ward 2, Friday	568 45

Amount carried forward	\$1,622 07
----------------------------------	------------

<i>Amount brought forward</i>	\$1,622 07
Ward 3, Saturday	331 02
Ward 4, Monday	313 38
Ward 5, Tuesday	315 51
Ward 6, Wednesday	394 72

Cost of labor, as per Superintendent's and Assistant Superintendent's records of work	\$2,976 70
Maintenance of carts	168 00
Maintenance of harnesses	42 25
Blacksmithing	41 24

Total	\$3,228 19
Amount charged by City Auditor to appropriation for removal of ashes	\$3,211 83
Amount charged by City Auditor to appropriation for highways, gen- eral repairs	16 36

Total	\$3,228 19
-----------------	------------

SIDEWALKS AND STREET CROSSINGS.

Amount appropriated by order of the City Coun- cil for the year 1886	\$10,000 00
Amount charged to appropriation for sidewalks and street crossings, as per Auditor's records	\$10,000 00
Amount charged by Auditor to other appropriations	4,375 03

Total amount expended as per Superin- tendent's and Assistant Superintendents' records of work	\$14,375 03
--	-------------

The following table shows the number of square yards of concrete sidewalk and street crossings laid and repaired, the number of feet of flag-stone crossings laid, and the cost of the same.

STREET.	WARD.	SQUARE YARDS OF CONCRETE.				No. OF FEET OF FLAGSTONE CROSSING.	COST.	REMARKS.
		SIDEWALKS REPAIRED.		CROSSINGS NEW.	CROSSINGS REPAIRED			
		SIDEWALKS NEW.						
Adams	1	27 65	-	66 22	-	-	\$67 63	Partly Gravel.
Arlington	7	120 21	-	85 30	-	-	187 84	Gravel.
Ash	4	-	-	-	-	-	5 75	Partly Gravel.
Auburn	3,4	211 11	1,279 43	91 39	43 66	-	1,066 65	Gravel.
Auburndale Ave	4	-	-	-	-	-	1 75	Partly Gravel.
Beacon	6	156 60	140 21	-	-	-	367 76	Gravel.
Bellevue	1	66 35	-	24 14	-	-	65 94	Gravel.
Bennington	1	425 56	-	99 87	-	-	271 71	Gravel.
Bourne	4	-	-	-	-	-	5 75	Gravel.
Bowen	6	-	-	-	-	-	77 00	Gravel.
Cabot	2	396 62	188 98	-	-	-	369 81	Partly Gravel.
California	2	-	-	-	-	-	11 07	Gravel.
Central Ave	2	128 89	-	-	-	-	71 14	Partly Gravel.
Central	4	373 61	123 64	-	-	-	268 04	Partly Gravel.
Centre	1,6,7	16 54	-	-	-	-	748 83	Partly Gravel.
Channing	1,7	459 40	33 85	-	39 84	333 30	354 62	Partly Gravel.
Chapel	2	86 38	-	-	-	-	64 55	Gravel.
Cherry	3	-	-	-	-	-	60 88	Gravel.
Chestnut	3,5	-	204 73	-	-	-	217 22	Partly Gravel.
Church	1	209 79	-	-	-	-	122 30	Gravel.
Cotton	6	-	-	-	-	-	144 90	Gravel.
Court	2	375 63	-	-	-	-	270 50	Gravel.
Crafts	2	100 00	-	-	-	-	149 41	Gravel.
Derby	3	-	-	109 28	-	-	159 13	Gravel.
Durant	7	-	-	102 06	-	-	91 86	Gravel.
Eldridge	7	63 11	43 05	-	-	-	63 77	Gravel.
Elliot	5	-	-	-	-	-	29 75	Gravel.

Elm	3	25 11	—	—	—	—	9 91	Gravel.
Emerson	7	—	—	—	—	—	21 12	
Erie Ave	5	52 85	—	—	—	—	17 18	
Fairmont Ave	1	215 45	—	—	—	—	193 91	Gravel.
Farlow Park	7	—	—	—	—	—	96 31	
Forest	5	183 87	213 74	42 03	—	—	222 30	Partly Gravel.
Franklin	5	79 34	—	—	—	—	158 68	
Fuller	7	—	26 58	—	—	—	5 74	Gravel.
Gibbs	4	—	—	—	—	—	35 50	Gravel.
Glen Ave	6	—	—	—	—	—	26 00	
Grove	6	155 97	185 70	94 23	—	—	295 04	Partly Gravel.
Hammond	4	30 43	240 74	51 30	—	—	170 57	Plank.
Hancock	6	—	—	—	—	—	173 75	
Hartford	4	96 58	—	—	—	—	42 14	Gravel.
Highland Ave	5	—	—	—	—	—	13 93	
Highland	2	22 14	—	—	—	—	14 39	
Hollis	3	79 33	443 09	—	—	—	124 69	
Homer	7	—	—	—	—	—	42 38	Gravel.
Hovey	6	—	—	—	—	—	107 15	Gravel.
Institution Ave	1	40 04	57 24	—	—	—	23 50	
Ivanhoe	6	76 84	—	—	—	—	56 95	Gravel.
Jewett	7	—	—	—	—	—	5 34	
Kenilworth	1	16 53	—	—	—	—	10 74	Gravel.
Lake Ave	7	—	—	—	—	—	5 33	
Laurel	6	123 24	58 59	—	—	—	98 24	
Lexington	6	83 98	167 63	—	—	—	126 67	
Lincoln Park	4	—	—	—	—	—	276 47	Partly Gravel. Partly
Linwood Ave	3	—	—	—	—	—	9 00	Gravel.
Lowell	2	—	—	—	—	—	19 50	
Lyman	2	267 40	—	—	—	—	114 38	Gravel.
Lyman	6	—	—	—	—	—	25 64	
<i>Am'ts carried forward.</i>		4,766 58	3,407 20	765 82	83 50	333 30	\$7,858 01	

laid in 1884.

STREET.	WARD.	SQUARE YARDS OF CONCRETE.				NO. OF FEET OF FLAGSTONE CROSSING.	COST.	REMARKS.
		SIDEWALKS NEW.	SIDEWALKS REPAIRED.	CROSSINGS NEW.	CROSSINGS REPAIRED.			
<i>Ans'ts brought forward</i>								
Margin	3	4,766 58	3,407 20	765 82	83 50	333 30	\$7,858 01	
Montrorse	7	173 10	-	-	-	-	68 76	Gravel.
Nevada	2	-	-	-	-	-	5 33	Gravel.
Newtonville Ave . .	1, 2	513 88	97 06	-	-	-	21 06	Partly Gravel.
Newtonville Sq. . .	2	333 93	-	195 83	-	-	491 64	
Nonantum Place . .	7	70 93	-	24 74	-	-	*	
Nonantum	7	120 02	-	-	-	-	67 03	Partly Gravel.
Otis	2	94 16	756 12	-	-	-	126 76	
Park	7	262 95	258 58	-	-	-	427 90	
Parker	6	-	-	-	-	-	245 34	
Paul	6	88 55	-	-	-	-	14 75	Gravel.
Peabody	6	-	-	-	-	-	28 78	
Pearl	7	179 04	87 79	-	-	-	34 22	
Pelham	1, 7	135 10	112 36	-	-	-	158 18	Partly Gravel.
Pembroke	6	-	24 12	-	-	-	72 27	
Perkins	7	-	-	39 67	-	-	61 32	Partly Gravel.
Pleasant	3	20 14	-	-	-	-	13 09	
Prospect	6	427 27	-	-	-	-	260 92	
River	3	-	-	-	-	-	69 60	Gravel.
Sargent	3	-	-	-	-	-	61 73	Gravel.
Seaverns	7	-	-	-	-	-	18 87	Gravel.
Shaw	4	344 27	75 10	-	-	-	24 25	
Station	3	231 84	376 90	150 00	-	-	257 30	Partly Gravel.
Summit	6	37 87	-	30 97	-	-	541 73	
Summer	1	-	-	-	-	-	52 49	
Vernon	6	-	-	-	-	-	84 00	Gravel.
	7	-	102 15	66 60	-	-	119 53	

Waban Park.	.	.	1	5 00	117 18	-	-	-	-	30 02	Partly Gravel and Plank.
Walnut Park	.	.	1	-	73 58	34 41	-	-	-	12 88	Partly Gravel.
Walnut	.	.	2, 5	446 08	64 07	49 29	39 26	78 65	1,123 30	124 86	Partly Gravel.
Waltham	.	.	3	-	-	31 68	-	-	-	46 76	Partly Gravel.
Warren	.	.	6	-	-	82 70	186 05	219 10	1,223 06	281 18	Partly Gravel.
Washington	.	.	1, 2, 3, 4, 7	247 63	386 92	-	-	-	-	219 42	Partly Gravel.
Watertown	.	.	1, 2	20 35	238 89	75 89	-	-	-	17 50	Gravel.
Waverly Ave.	.	.	7	6 57	-	-	-	-	-	68 54	Gravel.
Willow	.	.	6	-	-	-	-	-	-	13 93	Gravel.
Winthrop	.	.	3	210 90	-	-	-	-	-	28 72	
Woodward	.	.	5	-	-	-	-	-	-		
Miscellaneous	.	.		-	-	-	-	-	-		
Totals	.	.	.	8,736 16	6,178 02	1,547 60	308 81	631 05	\$14,375 03		

* Charged to Appropriation for Newtonville Square Improvement.

WATER DEPARTMENT.

The most important work carried on for this department was the completion of the contract of the Manhattan Artesian Well Company for driving tube wells, intended to furnish an additional water supply, and the test upon these wells in order to determine the amount of water they would yield.

The work was commenced under the first contract Nov. 30, 1885 and completed February 9, 1886. Under the second contract work was commenced April 24, 1886 and completed July 1, 1886. For a full description of the work and of the test I would respectfully refer you to my report to the Water Board made Sept. 30, 1886 and incorporated in their report to the City Council dated Dec. 31, 1886, pages 27 to 31.

After the test the wells were connected to a twelve inch pipe which was extended into the pump well and the water siphoned to the limits of the ground flow between grades 85 and 93. Should it be advisable at any time to draw the wells to a lower level, provisions have been made whereby this main can be connected to a pump in the basement of the pumping station and the connection with the well closed by a gate. The flow or suction pipe was made twelve inches in diameter, so that the size might be sufficient should it be desirable at some future time to put in more wells.

Surveys have been made, levels taken, and lines and

grades for the laying of water mains have been established on forty-three streets, covering a total length of four and thirty-four one hundredths miles. There have been located two hundred and ninety-eight services and extensions laid during the year.

The regular meetings of the Water Board have been attended and such subjects investigated or work superintended as specially directed by the Water Board, Registrar or Superintendent.

BOARD OF HEALTH.

The City Engineer having been reappointed as Agent of the Board of Health for the Inspection of Plumbing, the work begun last year was carried on as vigorously as possible and the rules have been more rigidly enforced than last year, numerous decisions by the Board having defined more clearly the interpretation of the rules which is held by the Board.

During the year the meetings of the Board have been attended, 1,035 inspections have been made upon 270 houses, and 173 letters have been written, besides numerous verbal requests, decisions, and answers to inquiries. Assistant Engineers Fred. H. Barnes and Arthur L. Woodruff were detailed as Inspectors of Plumbing and inspections were made of all work which came to the notice of this Department as the progress of the work seemed to warrant. The inspectors devoted to this work such portions of their time as seemed necessary in order to see that the rules were properly observed, and in many cases this work was performed to the serious inconvenience or neglect of the regular engineering work of the city. The past year's experience has demonstrated that the more time they have been able to give to conversation with plumbers and owners in explanation of the rules, the more ready has been the compliance with the requests of the Board. It has also been demonstrated that in order to get the best results, and more perfect work, every

step in its execution should be more closely watched. During the coming year should the policy of the Board be the same as during the past year, an assistant will be especially assigned to this work.

As stated in my last report, the Board, through the City Council, petitioned the General Court for authority to require all plumbers doing work in this city to be licensed, and March 29, 1886 the General Court passed Chapter 109 of the Acts of 1886 granting the desired authority. An ordinance has been drafted in accordance with this Act and is now under consideration by the Board. That the ordinance is needed is shown by the large amount of careless work found to have been done, in one case the entire plumbing for a bath room having been done personally by a tenant who was not a plumber. Such an ordinance will not only place the plumbers directly in contact with the Board but will also relieve the plumbers of the pressure to which they are frequently subjected by owners that are either ignorant of their own welfare or desirous of saving expense.

The inspection of new work this year has shown that more care is needed in several particulars. There is a tendency to leave the top end of the soil pipe near windows in the roof or other parts of the house so that odors rising through the pipes are blown into the house. In some houses small S traps are used for bath tubs, bowls, sinks or wash tubs. These traps are the same size as the waste pipes and as soon as they collect any grease the diameter begins to diminish, the sectional area of the trap becomes less than that of the waste pipe, and the trap becomes especially sensitive to either suction or force. In the case of one of these traps attached to a bowl on the second floor it was found that the wind blowing across the top of the soil pipe siphoned the trap and allowed the odor from the soil pipe to

escape into the room. As the bowl was in a sleeping room and within three feet of the head of the bed the danger is apparent to any one. In another case, a trap of this kind was found attached to a kitchen sink, the diameter of the trap being only three-quarters of an inch.

In the cheaper grade of houses, where the only fixture is a sink, it has been quite common in the past to use either a lead **S** trap or to place a large six inch earthen trap outside of the house in the main drain. During the past year an endeavor has been made to improve this plan. The small **S** trap is entirely unfitted for a kitchen sink on account of the large amount of grease which has to pass through it; the large earthen trap is so much larger than the waste pipe from the sink that it is liable to stoppage not only by the collection of grease, but by reason of the insufficient scouring it gets; this trap is usually buried up in such a way that it cannot be readily opened and cleaned. The trap recommended is the lead drum or round trap; under all ordinary circumstances this trap is practically anti-siphoning. It is generally set upon the floor under the sink, has a brass screw cover, can be readily opened and the grease removed as often as may be necessary. It has also been common in the cheaper grade of houses to construct a wash vault, so called. By this arrangement a vault is built having a pipe leading out from the bottom to a cesspool; the waste pipe from the kitchen sink runs into the vault and is supposed to wash out all the deposit. It is a primitive water-closet, but the flow of water from the sink rarely comes while the deposit is in a condition to be readily moved; the force of the water is rarely sufficient, and the general result is a combination of sink water and fæcal matter which is much more offensive than either alone. The dry vault, well cared for, and into which sink water is not allowed to enter, is much less offensive and is no more expensive.

More care should be used in running vent pipes from traps. These pipes should be so arranged as to have a constant upward direction. In connecting traps with the main vent pipe, it has been necessary in some cases to run the vent pipe up and then down into the main vent, in order to avoid cutting partitions, beams or floors; it can readily be seen that although this arrangement may not destroy the ventilation entirely, yet it is a defect and the downward turn prevents the perfect action of the pipe. In all cases of this kind care must be used to prevent any sags which may become traps by reason of condensation or other causes. All vent and soil pipes should be run as near as possible to warm chimneys or the inside walls of the house in order to secure by reason of the warmth of the pipes a constant upward tendency of the air within them. When gas or screw pipe is used for ventilation pipes, extra care should be taken that all joints are made tight. Where branches or vent pipes are left for future fixtures, care must be taken to see that the ends are properly plugged; in one case this year a two inch vent pipe was left open at the head of the cellar stairs in a position from which the gas could readily escape into all parts of the house.

During the year numerous examinations have been made of private houses at the request of either the owner or the tenant. Owing to the prevailing method of running all pipes inside of partitions or beneath floors which are securely nailed down, it is often quite difficult and sometimes impossible to make satisfactory examinations. All pipes should be run in positions where they can be readily exposed to view and in no case enclosed in plastered partitions. This suggestion I consider of value not only from the sanitary point of view, but also on account of the economy in making repairs. All spaces enclosing soil, waste or vent pipes should be ventilated.

The principal source of trouble in old houses has arisen from the continued use of the pan water closets which become foul in the receiver and defy cleaning except by taking them entirely apart. This style of closet is being largely replaced by the various patterns of hopper closets which are usually provided with a copious flush of water and can be readily kept clean. A source of bad odor is the lint and dust which collects under a water closet back of the front board. In pan closets there is often a leakage of the valves and in hopper closets a slight condensation which runs down on to the floor and keeps this lint and dust damp and finally produces a bad odor. If water closets were finished without front boards this defect would not occur and any leakage would be immediately discovered. In the old style of water closets the urine shield is often of wood or lead; the wood becomes saturated and the lead is seldom washed, so that the action of the urine upon either the wood or the lead is extremely offensive; enamelled iron shields are now generally used and they are not open to the above objections. The crockery and the shield of every water closet should be frequently washed and should be at all times kept clean and sweet. Water closets do not always have sufficient scour of water when used to properly clean them or to remove all deposit.

It was formerly customary to run the waste pipe from the bath tub and bowl in the bath room directly into the trap of the water closet without any trap for these fixtures except that of the water closet. The result is a liability of fæcal matter to stop up the waste pipes and bad odors frequently arise from them. In some instances the waste pipes have become so stopped from this cause, that water discharged from the bowl backs up into the bath tub and then slowly runs off from there. In one case noticed the bath

tub was pitched the wrong way and when the water from the bowl backed into the tub about one-half inch of dirty water remained at the head of the tub and could not run off. In some cases bath rooms or water closets are placed in rooms without windows; they should never be placed where they cannot have plenty of sunlight and air.

In one building the exhaust pipe from a steam engine in the basement was connected with a soil pipe which did not extend through the roof, the result being that the steam forced every trap in the tenements above, and frequently puffed out in the rooms. In one house that was repaired it was found that there had never been a trap on any fixture in the house, and one of the bath rooms in the house opened directly into a sleeping apartment.

After inspecting one residence the following report was sent to the tenant: "Hopper closet in cellar with direct supply from the city main, very poor flush or scour; wash tubs in cellar have drum trap apparently all right; bowl on first floor not known whether trapped or not; kitchen sink on first floor in same condition; waste pipe from bowl on second floor deposits contents in bath tub; waste from bath tub very slow, apparently stopped; no trap appears upon either bowl or bath tub; pan water closet sends out very strong stench when pan is dropped; the crockery and lead urine shield on this closet were extremely dirty and should be washed; general smell of bath room very foul and recommend that windows be kept open; soil pipe stops at second floor, has no foot vent and joints are apparently made of putty; same tank used to supply water closet on second floor that is used for boiler in kitchen."

The foregoing cases are samples that are frequently met by the inspectors and show the necessity which has existed for the rigid enforcement of the Rules ordered by the Board.

I am pleased to say that I think both owners and plumbers are appreciating more and more the necessity of more care in designing sanitary appliances and that the standard of work has been raised very much during the past year.

PUBLIC PROPERTY.

Under the direction of the Joint Standing Committee on Public Property plans were made for the alterations at the stables at Newton Upper Falls. The contract was awarded to Lyman A. Ross. The work consisted in re-arranging the former stable, and building a single story brick addition fifteen feet by nineteen feet six inches. The cellar of the old stable, which had been very offensive on account of the large amount of manure which accumulated in it, was thoroughly cleaned out; the soil under it which had become saturated was removed; about two feet of clean gravel was filled in, and a floor of cement concrete six inches in thickness was laid over the whole cellar. A brick wall to keep out the ground water was built up against the stone wall all around the cellar, inside, to a height of two feet above the new cellar bottom. A partition was set in the old stable to separate the fire and highway stables; two stalls were allowed to the fire department and the old box stall in that department was enlarged; four stalls were built in the highway stables. The entire floor of the old stable was removed and repaired. The wall between the old stable and the new addition was removed and the wall above supported by iron I beams and a post. The addition being used as a part of the highway stable gives more room than formerly for the stable work. A ventilation shaft was run up from the stable to the top of the main building.

The plumbing at Engine House No. 2 has been repaired and re-arranged and is now in better condition.

The plans made last year for improving the grounds of the Williams School House have been executed. The grading of the yard and slopes has been partially completed, the lawns have been graded and seeded and the walks have been partially concreted.

Plans have been made for improving the condition of the out-house at the Franklin School House.

SEWERAGE

In accordance with a recommendation of His Honor the Mayor, a Joint Special Committee on Sewerage was appointed, consisting of Aldermen Edward H. Mason and George M. Fiske, and Councilmen Andrew J. Fiske, N. Henry Chadwick and Lewis E. Coffin.

Early in March a meeting of the committee was held and a report made to the City Council favoring the plans of the Metropolitan Drainage Commission, whereupon the following resolve was passed by the City Council:

“Resolved: That in the opinion of the City Council the report made to the Legislature by a Commission appointed to consider a General System of Drainage for the Valleys of the Mystic, Blackstone and Charles Rivers, offers the most satisfactory solution of the problem of disposal of the sewerage of Newton, and that the Mayor, City Solicitor and the Chairman of the Joint Special Committee on Sewerage be requested to attend the hearings of the Committee on Drainage and Sewerage at the State House, in behalf of the City, to favor said report, and that our Representatives be requested to favor the passage of the legislation recommended in said report.”

In accordance with the requests of said resolves the representatives of the City appeared before the Committee on Drainage and Sewerage at the State House and urged that steps be taken as soon as possible toward the construc-

tion of disposal sewers. In these requests they were joined by the representatives of the City of Waltham and the Town of Watertown, but the plans of the Commission met with strong opposition from the Cities of Cambridge and Somerville, they having their sewer systems practically constructed and discharging directly into the Charles River.

As a result of this opposition no action was taken by the Legislature tending to give relief to the district; neither does it appear probable that favorable action will be taken for a number of years. In the mean time the City of Newton is increasing in population, the ground in many localities is becoming surcharged with sewerage, and must be a constant menace to the health of the community.

In the absence of any immediate action for relief on the part of the State, I would recommend that a joint special committee of the City Council be created and that immediate steps be taken to determine if some method of disposal cannot be devised, by which relief can be obtained.

ACKNOWLEDGEMENTS.

I wish to acknowledge with pleasure the support of His Honor the Mayor, the Water Board, the Board of Health, and the various committees of the City Council to this Department in the discharge of its duties.

I desire also to acknowledge the courtesies shown by the various heads of departments and the co-operation of the assistants of this department.

Respectfully submitted,

ALBERT F. NOYES, City Engineer.

ORDINANCES RELATING TO THE CITY ENGINEER'S DEPARTMENT.

ORDINANCE IX.

CITY ENGINEER.

SECTION 1. The office of City Engineer is hereby established.

Office_established.

SECT. 2. He shall have charge of all the plans of the streets, drains, sewers, water-works and lands of the city; and shall classify them and put them in convenient form for reference and use. He shall make all plans, surveys, measurements, and levels pertaining to the streets, drains, sewers, lands, water-works, &c., and perform such other duties properly belonging to his office as may be required of him by the Mayor, the Board of Aldermen, or any committee of the City Council. Drains and sewers shall be constructed and repaired under his supervision and direction.

Duties.

Charge of plans

Make plans, surveys, &c.

SECT. 3. He shall prepare all orders, resolves, and other papers relating to street widenings, extensions, and alterations, which the Joint Standing Committee on Highways may require, and shall furnish the City Solicitor with descriptions of lands at his request.

Orders, &c.

SECT. 4. He shall keep a set of books showing all the debits and credits to every estate, the

Accounts

whole or a portion of which may be taken to lay out, widen, or extend a street, or which may be assessed under any betterment law ; and all bills for assessments made under any betterment law shall be made out by him, and deposited with the City Treasurer for collection.

SECT. 5. He shall annually in the month of January present to the City Council a report for the year ending on the last day of December preceding, giving in detail the cost of all special work of the highway department, the expenses of his own department, the number of persons employed therein, and a description of the work done. Reports.

ORDINANCE XV.

WATER.

SECT. 13. Applications for the extension of the main water-pipes shall be presented to and acted upon by the City Council ; but no such extension shall be made until the City Engineer has established the line and grade to which the pipes should be laid, and certified to the same in writing to the Registrar. Extension of main water pipes.

No extension shall be made upon an unaccepted street unless the City Engineer finds that it is graded to a proper level, and those of the abut-tors whose consent is necessary give it in due form.

SECT. 14. Applications for service-pipe shall be made to the Registrar. When the cost, estimated by him, of the applicant's part has been deposited, the pipe shall be laid. From the main Application for service-pipe.

pipe to the street line opposite the point of connection, it shall be laid at the expense of the city, and the remainder at the cost of the applicant. The account shall be adjusted, and any balance paid, before the water is let on.

The location of service-pipe shall be fixed by the City Engineer.

ORDINANCE XVI.

HIGHWAY DEPARTMENT.—STREETS AND WAYS.

SECT. 4. Under the direction of the City Engineer, he (the Superintendent of Streets) shall attend to the making and repairing of drains and sewers.

Drains and
sewers.

ORDINANCE XXIV.

BUILDINGS.

SECT. 5. No person shall proceed to erect or make alterations in the location or grade of any fence, wall or building, a part of which is to abut upon a public street, lane, square or alley, without first applying to the City Engineer for the lines and grade of the street, lane, square or alley upon which he intends to build. Such application shall be made at least fifteen days before the work is begun; and the City Engineer shall within said time furnish the required lines and grade without charge, if in his power so to do. In default of such application the city shall be discharged from all responsibility for damages resulting from such default.

Applications to
City Engineer
for street lines
and grade.

SECT. 6. Whenever the City Engineer ascertains that any structure has been placed in violation of the preceding section, he shall at once

Violation.

give notice to the Mayor and Aldermen, in writing of such violation; and upon receipt of such notice the Mayor and Aldermen may forthwith issue an order to the party offending, directing that the structure be removed within the time therein specified; and in case of non-compliance, the Mayor and Aldermen shall direct that the incumbrance be removed at the expense of the delinquent.

SECT. 7. Whoever violates any provision of the two preceding sections of this ordinance, shall be liable to a fine not exceeding twenty dollars. Penalty.

By vote of the Board of Health June 8, 1885, the City Engineer was appointed Agent of the Board for the Inspection of Plumbing and authorized to enforce the following rules of the Board:

RULES AND REGULATIONS

—OF THE—

BOARD OF HEALTH.

TO BE ENFORCED BY THE AGENT FOR THE INSPECTION OF
PLUMBING.

RULE 1. Every tenement shall be provided with a suitable water-tight privy vault, or with a water-closet connected with a water-tight underground drain of proper size to carry off the contents, and with a similar drain to carry off the waste water to a cesspool.

b. Every privy vault or cesspool shall be built in a thorough and substantial manner, and located so that the inside of the same shall be at least three feet distant from the line of any adjoining lot or street. Cesspools must be of sufficient size to contain at least eighty cubic feet, eighteen inches below the surface of the ground, and, when not water-tight, must be at least twenty feet from the cellar wall of any tenement or dwelling, and two rods distant from any well, spring, or other source of water supply used for culinary purposes.

RULE 17. Unless the Board of Health shall permit otherwise, the drainage system of a hotel, tenement house, dwelling house, stable with sleeping apartments, or factory, in the city of Newton, Massachusetts, shall be constructed as follows:

SECT. 1—FILING PLANS AND SPECIFICATIONS. No person shall proceed to construct, add to, or alter any portion of the drainage system of said buildings (except to repair

leaks), until they have filed at the office of the City Engineer, upon blanks in such form as the Board of Health shall order, a notice of the work to be performed. No person shall commence work on such drainage or plumbing until the plans are approved by the Board of Health. Plans and specifications will be approved or rejected within five days of the time of filing. After a plan has once been approved, no alteration of the same will be allowed except on a written application of the owner.

SECT. 2—NOTICE. The Board of Health must be notified when any work is ready for inspection, and all work must be left uncovered and convenient for examination until inspected and approved.

SECT. 3—INSPECTION. All plumbing work in new buildings or new work in old buildings, shall be tested by the Board of Health, with the hydraulic or such other test as the Board may direct; and in case the work does not stand the test, and the same is not repaired within ten days, the water shall be turned off, by order of said Board, and not let on again till the plumbing has been pronounced satisfactory by the said Board.

SECT. 4—MAIN DRAIN. Every building herein referred to shall be separately and independently connected with a common sewer or cesspool.

That portion of the house-drain which is outside of the building, and more than four (4) feet from the foundation walls, shall be constructed of extra heavy cast iron soil pipe or of the best quality of vitrified drain pipe.

That portion of the house-drain which is inside the walls, or under the building, and that portion outside of the building and within four feet of the foundation wall, must be of iron pipe with a fall of at least one half (1-2) inch to the foot. It must run along the cellar wall, and be securely fastened thereto, or suspended from the floor timbers in iron hangers.

When impracticable, it shall be laid in a trench, beneath the basement or cellar floor, provided with movable covers and walled up of such a width as to admit of access to all joints.

SECT. 5—TRAPS. The house drain must have a trap located beyond all house connections, of the same size as the drain, provided with a hand hole for convenience in cleaning.

SECT. 6—FRESH AIR INLETS. There must be a fresh air inlet pipe entering the drain on the house side of the main trap, of not less than four inches internal diameter, extending therefrom to the external air and terminating at a point not less than three (3) feet above the ground, away from all windows.

SECT. 7—SOIL PIPE. All pipes receiving the discharge from water closets must be of iron at least four (4) inches internal diameter, and continued of undiminished size at least two (2) feet above the roof, away from all windows, and left open at the top.

SECT. 8—BRANCHES. All branches over ten feet in length must be continued of undiminished size to the roof, and carried up at least four inches internal diameter through the roof, and project at least two feet above it, and left open.

SECT. 9—CONNECTIONS. All connections with horizontal pipes shall be made by 1-8 bends and Y branches, and all changes in direction shall be by curved pipe. No trap shall be placed at the foot of a vertical soil pipe.

SECT. 10—WASTE PIPES. All waste pipes from sinks, basins, bath tubs, wash tubs, etc., of two inches or less internal diameter, shall be of lead; all over two inches must be of iron.

SECT. 11—RAIN WATER CONDUCTORS. Wherever rain water conductors are connected with any pipe of the drainage system of the house, that portion within the house, or

under ground, or five feet above the ground, to be of cast iron pipe with lead joints, and in all cases provided with an extra deep trap where it enters the house drain. No rain water conductor shall be used as a soil pipe.

SECT. 12—TRAPS. Every pipe connecting a water closet with the soil pipe must be trapped close to the connection with the water closet. Every waste pipe must be trapped close to the fixture, and separately from any water closet.

SECT. 13—SAFE WASTES. All waste pipes from safes under fixtures must be run separately to basement or cellar, and left open; in no case must they be connected with the soil pipe or any other waste pipe.

SECT. 14—REFRIGERATOR WASTES. No waste pipe from a refrigerator or other receptacle in which food or provisions are stored shall be connected with a drain, soil or other waste pipe, but must be separated therefrom by an open sink or tray furnished with a trap.

SECT. 15—TANK OVERFLOW. All overflow pipes from tanks must be left open and in sight. In no case shall it be run into a soil or waste pipe.

SECT. 16—VENTILATION OF TRAPS. All traps must be furnished with a vent pipe run from the crown of the trap. The vent pipe from a water closet trap must be at least two inches in diameter; other vent pipes must be as large as the waste pipe from the trap. All ventilation pipes from a soil or waste pipe must be run, of undiminished size, separately or combined together, to the roof and carried up at least four inches, internal diameter, through the roof and at least two feet above it, and left open, or may be run into a soil pipe above all connections. In no case shall a soil, waste or ventilating pipe from a soil or waste pipe be connected with a chimney. No brick earthenware or sheet metal pipes shall be used for ventilation pipes from a soil or waste pipe.

SECT. 17—CAST IRON PIPES. All cast iron pipes must be free from holes and other defects, of a uniform thickness of not less than 1-8 inch for a diameter of four inches or less,

and not less than 5-32 of an inch, for 5 and 6-inch pipe, and shall have the full weight of the following table for the corresponding diameters:

Internal diameter.		Ordinary pipe.	Extra heavy pipe.	
2 inches.	- -	3 1-2 lb. per ft.	- -	5 1-2 lb. per ft.
3 inches,	- -	4 1-2 " "	- -	9 1-2 " "
4 inches,	- -	6 1-2 " "	- -	13 " "
5 inches,	- -	8 " "	- -	17 " "
6 inches,	- -	10 " "	- -	20 " "

And before being connected shall be thoroughly coated inside and out with coal-tar pitch, applied hot by immersion, or some equivalent substance satisfactory to the City Engineer.

SECT. 18—QUALITY OF JOINTS. Every joint in earthen pipe shall be made in hydraulic cement, care being taken that the inside of the joints and of the pipe is properly cleaned out before connection is made with the house. Every joint in lead pipe shall be made in solder, and wiped joints are to be used where practicable. Every joint of an iron and a lead pipe shall be made by a brass ferrule of same size as lead pipe, set in the hub of the branch of the iron pipe, and caulked with lead; the lead pipe to be attached to the ferrule by a wiped solder joint. Every joint in a cast-iron bell and spigot pipe to be made with packed oakum and molten lead well caulked, at least 1 1-2 inches deep, and made water and air-tight, and no paint or putty shall be allowed until tested. Where screw-joints are used, they shall be packed in red-lead and made steam-tight.

SECT. 19—WATER CLOSET SUPPLY. No water closet shall be supplied directly from the house supply pipe, but shall be supplied from a special water tank or cistern used for no other purpose.

RULE 18. Whoever shall violate any provision of these rules, shall be liable to a fine not exceeding one hundred dollars, and a like penalty for every day after the first offence shall be committed.

CONTENTS.

Appropriations, Transfers, Mayors Warrants	341
Assets	332
Board of Health Report	133
Board of Health, Agent Inspection Plumbing	561
Board of Health Rules, etc.,	576
City Auditor, Duties of	321
“ “ Report	299
City Clerk, Births, Marriages and Deaths, Voters, Enrolled Militia, Dogs, etc.,	507
City Engineer, Agent Board of Health	561
“ “ Highways	532
“ “ Ordinance relating to	572
“ “ Public Property	568
“ “ Report	517
“ “ Sewerage	570
“ “ Water Department	559
City Government	306
City Treasurer's Account	325
Debt, permanent	344
Expenses	338
Kenrick Fund Statement	345
Ledger Balances	346
Liabilities	330
Read Fund, Trustees Report	351
Receipts	336
Receipts and Expenditures	351
Sinking Funds, Commissioner's Report	347
Taxes and Taxable Valuation	345

DETAIL OF RECEIPTS.

Almshouse	351
Armory	352
Betterments	352
City Hall	352
Collector's Fees	353
Corporation Tax	353
Dog Tax	353
Drains and Culverts	353
Druggists' License Fees	354
Funded Debts—Water Bonds	354
Funded Debt—Public Library Loan	355
Funded Debt—High School Loan	355
Gravel Land	356
Highway Department	356
Indigent Soldiers and Sailors	360
Interest on Farlow Park Betterments	358
Interest on Deposits	359
Interest on Taxes	359
Interest on City Loans	359
Interest on Water Bonds	359
Interest on Real Estate Tax Title	360
Kenrick Fund Income	361
Miscellaneous	361
National Bank Tax	361
Newton Free Library	362
Police Department	362
Poor out of Almshouse	362
Peddlers' Licenses	364
Parks and Squares	364
Public Property	364
Record and Other Fees	365

CONTENTS.

iii

Real Estate Tax Title	365
Read Fund Income	365
School Incidentals	365
Ships Engaged in Foreign Trade	365
Sinking Fund Commissioners	366
Sidewalks and Curbing	366
State aid	366
Suspense Account	366
Taxes, 1883 to 1887	366
Temporary Loans	368
Tuition for Non-Resident Pupils	367
Water Construction	486
Water Department	369
Water Maintenance	369
Water Meters and Service-Pipes	369
Water-Rates	369
Water-Rates by Meters	369

DETAIL OF EXPENDITURES.

Almshouse	370
Armory expenses	373
Auburndale Williams Schoolhouse	373
Auburndale Sub-way	373
Board of Health	375
Books, Stationery and Printing	374
Burial-Grounds	376
Conveyance of Pupils	377
Curbing	377
City Hall	377
City Engineer's Department	379
Drains and Culverts	380
Evening Schools	382

CONTENTS.

iv

Fire Department	383
Funded Debt	399
Funded Debt, Schoolhouse Note	399
Gravel Land	400
Highways, General Repairs	400
Highways, Widening, Reconstruction and Im- provements	412
Interest on City Loans, permanent	412
Interest on City Loans, temporary	413
Interest on Water Bonds	414
Indigent Soldiers and Sailors	414
Land Damages	415
Memorial Day	416
Miscellaneous Expenses	416
Newton Free Library	430
Newton Free Library Addition	434
Parks and Squares	434
Police Department	435
Poor out of Almshouse	439
Poor out of Almshouse, Commonwealth of Mas- sachusetts	445
Public Property	445
Removal of Ashes	452
Read Fund Income	453
Salaries	453
Schools, General Appropriation for	454
Schools, Enlargement of High School Building	462
Schools, Incidentals	462
Sidewalks and Street Crossings . ; .	469
Sinking Fund, City Debt	469
Sinking Fund, School Loan	470
Sinking Fund, Water Bonds	470
Sinking Fund, Public Park Loan	470

CONTENTS.

v

State Aid	470
Street Light Department	471
Suspense Account	473
Taxes, County, Corporation, National Bank, State	473
Temporary Loans	474
Use of Hydrants	474
Underwood Schoolhouse, improvement of . .	475
Water Construction	481
Water Maintenance	475
Water Meters and Service Pipe	479
Water Rebate	481

Schedule of City Property, Real and Personal .	486
Table showing the Number of Polls, Real and Personal Estate, etc.,	493
Table showing Amount paid for Support of Poor out of Almshouse, from 1851 to 1886 inclusive	494
Salaries of City Officers, 1886	494
City Government, 1887	499

